

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Appendix C
Statement of Work-East Side

Appendix C to the Consent Decree

RD/RA STATEMENT OF WORK

**Eastern Shallow and Southern Deep
Portions of the Interim Remedial Action**

El Monte Operable Unit

SAN GABRIEL VALLEY SUPERFUND SITE AREA 1

LOS ANGELES COUNTY, CALIFORNIA

October 2003

TABLE OF CONTENTS

I.	<u>INTRODUCTION</u>	1
II.	<u>SUMMARY OF THE EL MONTE OU REMEDIAL ACTION</u>	2
III.	<u>PERFORMANCE CRITERIA</u>	3
IV.	<u>LIST OF DELIVERABLES AND OTHER TASKS</u>	8
	A. <u>COMPLIANCE AND SENTINEL WELL NETWORK PLAN</u>	9
	B. <u>COMPLIANCE AND SENTINEL WELL INSTALLATION REPORT</u>	9
	C. <u>REMEDIAL DESIGN / REMEDIAL ACTION WORK PLAN</u>	9
	D. <u>REMEDIAL DESIGN</u>	13
	E. <u>REMEDIAL ACTION</u>	18
	F. <u>OPERATION AND MAINTENANCE</u>	21
	G. <u>COMPLIANCE MONITORING PLAN</u>	23
	H. <u>MONITORING PLAN(S) FOR OTHER POTENTIAL REMEDIAL ACTIONS</u>	25
	I. <u>GENERAL MONITORING PLAN</u>	25
	J. <u>PERFORMANCE EVALUATION REPORTS</u>	28
	K. <u>PROGRESS REPORTS</u>	28
	L. <u>COMPLIANCE MONITORING REPORTS</u>	29
	M. <u>SUPPORTING PLANS</u>	29
	N. <u>WORK COMPLETE REPORT</u>	33
V.	<u>SCHEDULE FOR MAJOR DELIVERABLES AND OTHER TASKS</u>	34
	DESIGN-BUILD SCHEDULE	34
	DESIGN-BID-BUILD SCHEDULE	40
VI.	<u>REFERENCES</u>	45
 <u>FIGURES AND ATTACHMENTS</u>		
	Approximate Post-RI/FS Well Locations	Figure 1
	Water Quality Data, Early Response Action Program Monitoring	Table 1
	June 1999 Interim Record of Decision	Attachment 1
	Explanation of Significant Differences	Attachment 2
	Summary of Pre-Remedial Design Work	Attachment 3

**STATEMENT OF WORK FOR
REMEDIAL DESIGN AND REMEDIAL ACTION
(East Side)
El Monte Operable Unit
San Gabriel Valley Superfund Site Area 1**

I. Introduction

This Statement of Work (SOW) describes the activities the East Side Performing Settling Defendants must perform to design, construct, operate, maintain, monitor, and evaluate a portion of the interim remedial action described in the El Monte Operable Unit (EMOU) Interim Record of Decision (IROD), as supplemented by the Explanation of Significant Differences (ESD), and as set forth in this SOW. The IROD, which specifies the remedy for the site, was signed June 23, 1999. The ESD was issued in August 2002. This SOW is Appendix C to the EMOU Consent Decree.

The interim remedial action described in the IROD includes performance criteria that require control of contaminant migration in the shallow zone, the deep zone northwestern area, and the deep zone southern area. The East Side Performing Settling Defendants to this Consent Decree are required to implement the deep zone southern area remedial action and a portion of the shallow zone remedial action (the eastern portion). The eastern portion of the shallow zone generally refers to the contamination present east of Baldwin Avenue (Figure 1).

The EMOU addresses a several-square-mile area of groundwater contamination extending beneath portions of El Monte, Rosemead, and Temple City, in Los Angeles County, California. Chemicals of potential concern in the groundwater in the EMOU include volatile organic compounds (VOCs) listed in Table 5 of the IROD (Attachment 1) and emerging chemicals (ECs) perchlorate, n-Nitrosodimethylamine (NDMA), hexavalent chromium, and 1,4-dioxane listed in the ESD (Attachment 2).

EPA intends to review deliverables to assess whether or not the remedial action will achieve the remedial objectives defined in the IROD, as supplemented by the ESD, and Performance Criteria set forth in the IROD, ESD, and this SOW. EPA review or approval of a task or deliverable shall not, however, be construed as a guarantee of the adequacy of such task or deliverable.

A description of the pre-Remedial Design work that has been completed by the Potentially Responsible Parties (PRPs) can be found in Attachment 3 of the SOW.

The definitions set forth in Section IV of the Consent Decree shall apply to this SOW unless expressly provided otherwise herein.

II. Summary of the El Monte OU Interim Remedial Action Components to be Addressed by this SOW

Shallow Zone - Eastern Portion:

The IROD, as supplemented by the ESD, requires the remedial action to prevent shallow zone groundwater contamination that exceeds 10 times the ARARs (Table 5 of the IROD) from migrating beyond its current lateral and vertical extent. Figure 2 of the IROD showed that, as of 1997, the higher concentration shallow zone contamination was distributed in two areas of the EMOU. A more recent 2002 depiction of the shallow VOC contamination in the EMOU is shown on Figure 1 of this SOW. Groundwater must be monitored for compliance to verify that Performance Criteria are met. Compliance with Performance Criteria will be evaluated using data collection and analysis procedures outlined in the Compliance Monitoring Plan, as well as information presented in compliance monitoring and performance evaluation reports. EPA shall approve the locations and specifications of the shallow zone compliance wells.

Deep Zone - Southern Area:

The IROD requires the remedial action to provide sufficient hydraulic control to prevent deep zone groundwater contamination that exceeds the ARARs listed in Table 5 of the IROD from migrating beyond the current lateral and vertical extent, as described in the EMOU RI/FS, in the southern portion of the EMOU. Achieving hydraulic control will likely require new extraction wells near the downgradient end of the contaminated area.

Compliance wells shall be installed in strategic locations to verify that the hydraulic control is sufficient to meet the Performance Criteria. The approximate extent of the southern deep zone plume can be found in Figure 3 of the IROD. EPA shall approve the locations and specifications of the deep zone compliance wells. Sentinel wells located upgradient of the compliance wells are recommended to avoid exceedances of the Performance Criteria.

Compliance monitoring wells should be located such that if ARARs are exceeded or are expected to be exceeded in upgradient sentinel monitoring wells, adequate time is available to take action to maintain concentrations below ARARs at the compliance wells.

Initial Remedial Design Work:

As an initial step, East Side Performing Settling Defendants shall design and install the compliance wells (and sentinel wells, if necessary) in the shallow and deep groundwater zones. East Side Performing Settling Defendants shall demonstrate to EPA's satisfaction that each well is appropriate for measuring compliance, as described in Section III (Performance Criteria) of this SOW. Prior to installation of compliance and sentinel wells, East Side Performing Settling Defendants shall submit to EPA a Compliance and Sentinel Well Network Plan, describing the proposed locations and specifications of the wells, as required in Section IV of this SOW. After installation and sufficient sampling of each proposed compliance and sentinel well, EPA shall

determine whether the location and construction of each well is acceptable for its proposed use. East Side Performing Settling Defendants shall submit a Compliance and Sentinel Well Installation Report, signifying the time at which compliance monitoring will begin, as described in Section IV of this SOW. After EPA approval of the Compliance and Sentinel Well Installation Report, East Side Performing Settling Defendants shall assume quarterly sampling of each well to ensure that the Performance Criteria are met in the shallow and deep zones, and submit Quarterly Compliance Monitoring Reports, as required by the Compliance Monitoring Plan.

Other Remedial Design requirements are set forth in Sections III and IV of this SOW.

III. Performance Criteria

As specified in the Consent Decree, East Side Performing Settling Defendants shall meet all Performance Criteria, Remedial Action Objectives and Applicable or Relevant and Appropriate Requirements (ARARs) set forth in the IROD, ESD, and this SOW. The IROD states that the Remedial Action Objectives (RAOs) for the EMOU are to prevent exposure of the public to contaminated groundwater above MCLs; inhibit contaminant migration from the more highly contaminated portions of the aquifer to the less contaminated areas or depths; reduce the impact of continued contaminant migration on downgradient water supply wells; and protect future uses of less contaminated and uncontaminated areas. All compliance monitoring data shall be reported in the Quarterly Compliance Monitoring Reports. The IROD requires that the remedial action provide sufficient hydraulic control of contaminated groundwater in the shallow and deep zones to meet the Performance Criteria.

The Performance Criteria include the treatment standards, standards of control, quality criteria, and other substantive requirements, criteria or limitations included in the IROD and ESD.

A. Shallow Zone Compliance with Performance Criteria

The remedial action shall prevent groundwater in the shallow zone with VOC contamination above 10 times the ARARs (Table 5 of the IROD) from migrating beyond its current lateral and vertical extent.

East Side Performing Settling Defendants shall monitor compliance with this criterion at a sufficient number of wells that meet the following requirements and have been approved by EPA:

- (1) Wells located laterally and vertically downgradient of shallow groundwater contamination exceeding 10 times the relevant VOC ARARs, but generally within areas where VOC concentrations exceed the ARARs listed in Table 5 of the IROD.

- (2) Wells completed with screen lengths generally of 20 feet or less located between the water table and 130 feet bgs. Alternative screened intervals and well depths may be appropriate in limited situations and will be subject to EPA evaluation and approval on a case-by-case basis.

East Side Performing Settling Defendants shall conduct quarterly sampling at the shallow zone compliance wells to ensure compliance with the shallow zone Performance Criteria. Results shall be reported in the Quarterly Compliance Monitoring Reports. The frequency of sampling may be decreased in the future if the monitoring data support such a decrease, and East Side Performing Settling Defendants obtain EPA approval. Conversely, if it appears, based on trends in sampling data, that concentrations may exceed the Performance Criteria, the sampling frequency may be increased. Contaminant concentrations at the compliance wells will be the absolute criteria for evaluating compliance. The Compliance Monitoring Plan shall specify how compliance well data will be used to demonstrate compliance with the Performance Criteria. EPA expects that groundwater containment actions will be implemented sufficiently upgradient of the compliance wells to provide enough of a buffer zone to allow additional actions to be taken, if necessary, to ensure compliance. The use of sentinel well data will be permitted to guide containment actions which may affect or alter the measurements at the compliance wells.

To avoid exceedances of the shallow zone performance criteria, EPA recommends that East Side Performing Settling Defendants install additional sentinel wells or use existing wells upgradient of the compliance wells, where appropriate, as an early warning system to provide East Side Performing Settling Defendants sufficient time to address and prevent noncompliance.

B. Deep Zone Compliance with Performance Criteria:

The remedial action shall provide sufficient hydraulic control to prevent groundwater in the deep zone with VOC contamination above ARARs (Table 5 of the IROD) from migrating beyond the current lateral and vertical extent, as described in the EMOU RI/FS, in the southern portion of the EMOU.

In the southern portion of the OU, achieving hydraulic control may require new extraction wells near the downgradient end of the contaminated area. If production wells are used, East Side Performing Settling Defendants shall demonstrate that pumping from the production wells alone, or in combination with new extraction wells, provides sufficient hydraulic control to meet the Performance Criteria. If production wells are used, East Side Performing Settling Defendants shall also provide assurances acceptable to EPA that the wells will operate in a manner that ensures compliance with the Performance Criteria, if possible. The East Side Performing Settling Defendants shall provide copies of

agreements between themselves and the water companies or entities who own the production wells to EPA for approval. The remedial measures must provide sufficient hydraulic control, without the aid of other wells not included in the remedial action, to ensure that the Performance Criteria are not exceeded.

East Side Performing Settling Defendants shall monitor compliance with this criterion at a sufficient number of compliance wells that meet the following requirements and have been approved by EPA:

- (1) Located within 2,000 feet of the current extent of groundwater contaminated with any VOC exceeding its ARAR. The intent of locating these wells in this manner is to provide compliance points that are sufficiently distant from existing contamination above ARARs to provide enough time to ensure that additional actions can be taken before threshold concentrations are exceeded. The wells must also be sufficient in number, appropriately screened and adequately located to ensure that contamination above ARARs does not migrate away from the southern area. Because the downgradient extent of deep zone contamination in the southern area is not well defined, additional data collection during the remedial design may be necessary in this area.
- (2) Located generally west to southwest of the current extent of deep zone contamination, within the area with detectable VOC concentrations in the deep zone.
- (3) Completed with screen lengths of 20 feet or less within the deep zone. Larger, or multiple depth, screened intervals may be appropriate in limited situations subject to EPA evaluation and approval on a case-by-case basis.

East Side Performing Settling Defendants shall conduct quarterly sampling at the deep zone compliance wells to ensure compliance with the deep zone Performance Criteria. Results shall be reported in the Quarterly Compliance Monitoring Reports. The frequency of sampling may be decreased in the future if the monitoring data supports such a decrease and East Side Performing Settling Defendants obtain EPA approval. Conversely, if it appears, based on trends in sampling data, that concentrations may exceed the Performance Criteria, the sampling frequency may be increased. Contaminant concentrations at the compliance wells will be the absolute criterion for evaluating compliance. The Compliance Monitoring Plan shall specify how compliance well data will be used to demonstrate compliance with the Performance Criteria. EPA expects that groundwater containment actions will be implemented sufficiently upgradient of the compliance wells to provide enough of a buffer zone to allow additional actions to be taken, if necessary, to ensure compliance.

C. Additional Requirements

Implementation of the remedial action shall not adversely affect production wells that are not part of the remedial action (i.e., shall not increase the migration of contamination into the wells). In addition, the remedial action must meet the Performance Criteria for both the shallow and deep zones without relying on the wells that are not part of the remedial action.

Indications of an imminent exceedance of the Performance Criteria at a compliance well will be considered as evidence that groundwater contamination is migrating and that additional hydraulic containment or alternative, appropriate measures, as approved by EPA, shall be required. In the event of an actual or imminent exceedance of the Performance Criteria at the compliance wells, East Side Performing Settling Defendants shall take actions (e.g., implement additional groundwater extraction and treatment) to achieve sufficient hydraulic control within a time frame specified in the Compliance Monitoring Plan (Section IV.G). A verified exceedance of the Performance Criteria at a compliance well is a violation of the Consent Decree which may result in enforcement action.

D. Groundwater Treatment and Discharge

East Side Performing Settling Defendants shall treat all groundwater that is extracted pursuant to this SOW. East Side Performing Settling Defendants shall install and operate treatment systems that are designed to reduce the concentrations of the contaminants listed in Table 5 of the IROD to below ARARs. Subject to EPA approval, these requirements may not apply to EPA-approved CERCLA Section 104(b) activities that will result in temporary high flow, high volume discharges (e.g., discharges from sampling of selected water supply wells or aquifer tests).

Extracted groundwater is expected to be treated with air stripping (with off-gas controls) or liquid-phase carbon adsorption to remove the contaminants listed in Table 5 of the IROD. Extracted groundwater may need to be treated for the contaminants listed in the ESD by ion exchange and ultraviolet light with oxidation, or other appropriate technologies, as necessary to achieve compliance with the ARARs. If alternative treatment technologies are proposed, EPA will evaluate the alternative technologies in accordance with the criteria specified in 40 CFR Section 300.430 during remedial design.

Following treatment, extracted groundwater can either be provided to local water purveyors for use in the San Gabriel Basin ("the Basin"), or discharged to Eaton Wash or the Rio Hondo. Alternative discharge options may be used, subject to EPA approval. Unless waived by the appropriate agencies and approved by EPA, disposal of the treated groundwater must comply with the applicable or relevant

and appropriate requirements (ARARs) identified in the IROD and other requirements for the contaminants listed in the ESD that need to be considered. In addition, introduction of treated groundwater into a public water supply is an offsite activity that must comply with all other state and federal requirements in effect at the time of the activity.

The extraction and treatment of groundwater shall comply with the following requirements:

1. Treatment systems shall be designed and operated to reduce the concentrations of contaminants to below the ARARs listed in Table 5 of the IROD under all anticipated operating conditions; treatment systems for the contaminants listed in the ESD shall be designed and operated, as necessary, to achieve compliance with ARARs.
2. Best available control technology for toxics (T-BACT) shall be used on new stationary operating equipment, so the cumulative carcinogenic impact from air toxics does not exceed the maximum individual cancer risk limit of ten in one million (1×10^{-5}), as required by South Coast Air Quality Management District (SCAQMD) Rule 1401;
3. For water to be provided to a public water supply, the installation and operation of treatment systems shall be designed to reduce the concentrations of parameters for which there are Federal or State *Secondary* MCLs to attain secondary MCLs;
4. Extraction and treatment systems shall comply with the substantive portions of SCAQMD Regulation XIII, comprising Rules 1301 through 1313, pertaining to new source review;
5. Extraction and treatment systems shall comply with the water quality objectives for discharge of treated water from the Regional Water Quality Control Board (RWQCB) Los Angeles Basin Plan and State Water Resources Control Board (SWRCB) Resolution 68-16, as outlined in the IROD;
6. Extraction and treatment systems shall comply with limits in visible emissions (SCAQMD Rule 401) and particulate concentrations (SCAQMD Rule 403);
7. Extraction and treatment systems shall not cause the discharge of material that is odorous or causes injury, nuisance or annoyance to the public (SCAQMD Rule 402);

8. Extraction and treatment systems shall comply with the substantive requirements in Title 22, California Code of Regulations (CCR), Sections 66264.601 -.603 for *Miscellaneous units*, and related substantive closure requirements in Sections 66264.111 - .115 for air strippers or granular activated carbon (GAC) contractors;
9. Extraction and treatment systems shall comply with container and storage requirements in Title 22, CCR, Sections 66264.170 - .178 for the storage of contaminated groundwater over 90 days;
10. Extraction and treatment systems shall comply with Title 22, CCR, Sections 66262 and 66268 and other State Hazardous Waste Control Act (HWCA) requirements for storage and disposal if the spent carbon is classified as a hazardous waste; and
11. Extraction and treatment systems shall comply with the substantive portions of the State Water Well Standards for construction of water supply wells.

IV. List of Deliverables and Other Tasks

East Side Performing Settling Defendants shall submit plans, specifications, and other deliverables for EPA review and/or approval, as specified below. EPA may also request periodic updates of selected deliverables (e.g., Work Plan, Sampling Plan, Monitoring Plans, etc.) described in this section of the SOW, as more information is gathered or as conditions change during implementation of the RD/RA. One copy of each final written deliverable shall be provided in an unbound format suitable for reproduction; additional copies shall be provided as stated in the Consent Decree. Information presented in color must be legible and interpretable when reproduced in non-color. If EPA requests, final written deliverables shall also be provided in electronic format. Subject to approval in advance by EPA, large format submittals may also be submitted electronically in a CD deliverable format.

East Side Performing Settling Defendants shall implement quality control procedures to ensure the quality of all reports and submittals to EPA. These procedures shall include but are not limited to: internal technical and editorial review; independent verification of calculations; and documentation of all reviews, problems identified, and corrective actions taken.

As described in Section XI of the Consent Decree, EPA may approve, disapprove, or modify each deliverable. Major deliverables are described below and shall be submitted according to the schedule in Section V of this SOW.

A. Compliance and Sentinel Well Network Plan

Prior to installation of compliance and sentinel wells, East Side Performing Settling Defendants shall submit to EPA a Compliance and Sentinel Well Network Plan, describing the proposed locations and specifications of the compliance or sentinel wells. All existing wells that may be used for compliance or sentinel purposes must be described in this plan. Additionally, all proposed new compliance and sentinel wells must be described and a schedule for their installation provided. East Side Performing Settling Defendants shall demonstrate to EPA's satisfaction that each proposed compliance well is appropriate for measuring compliance, as described in Section III (Performance Criteria) of this SOW. This plan will include sampling procedures for confirming the adequacy of all proposed compliance and sentinel wells. East Side Performing Settling Defendants must sample each proposed compliance and sentinel well at least two times to demonstrate that each well is suitable to be a compliance well as described in the IROD and this SOW. Additional confirmation sampling may be required for proposed compliance wells if initial sampling results are inconsistent. After installation and sufficient sampling, EPA shall determine whether each well is acceptable for use as a compliance and or sentinel well.

B. Compliance and Sentinel Well Installation Report

After installation of the compliance and sentinel wells, East Side Performing Settling Defendants shall submit a Compliance and Sentinel Well Installation Report, signifying the time at which compliance monitoring will begin. This report will include all sampling results for all proposed compliance and sentinel wells, and the data must show concentrations that adhere to the requirements for compliance and sentinel wells as outlined in the IROD and this SOW. After EPA approval of the Compliance and Sentinel Well Installation Report, East Side Performing Settling Defendants shall assume quarterly sampling of each well to ensure that the Performance Criteria are met in the shallow and deep zones, and submit Compliance Monitoring Reports, as required by the Compliance Monitoring Plan, described in Section IV.G of this SOW.

C. Remedial Design/Remedial Action Work Plan

East Side Performing Settling Defendants shall submit a Work Plan that describes the management strategy for design and construction of the remedial action ("RD/RA Work Plan"). The RD/RA Work Plan must be reviewed and approved by EPA in accordance with Section XI of the Consent Decree. The Work Plan shall include:

1. Project Description

The RD/RA Work Plan shall include a description of the work to be implemented by East Side Performing Settling Defendants. The initial work should first and foremost focus on the location, installation, and monitoring of compliance and sentinel wells, including preparation of the Compliance and Sentinel Well Network Plan as required in Section IV of this SOW. The Work Plan shall also include, where applicable, additional data collection efforts (see Section IV.C.7 of this SOW); extraction locations; treatment technologies; details on planned discharge of the treated water; locations of major project components; an approach for evaluating existing equipment and facilities to be used as part of the remedial action; and other key aspects of the project. The Work Plan shall briefly discuss the condition, anticipated longevity, and any limitations in the use of each existing facility.

2. Description of the Responsibility and Authority of All Organizations and Key Personnel Involved With the Remedial Action.

The RD/RA Work Plan shall include a description of the responsibilities and qualifications of key personnel expected to direct or play a significant role in the Remedial Design, Remedial Action, or Operation and Maintenance, including East Side Performing Settling Defendants' Project Coordinator, Designer, Construction Contractor, Construction Quality Assurance personnel, and Resident Engineer. The Work Plan shall define lines of authority and provide brief descriptions of duties.

3. Schedule

The RD/RA Work Plan shall identify the initiation and completion dates for each required design activity, construction activity, inspection, and deliverable required by the Consent Decree and this SOW, consistent with the schedule included as Section V of this SOW.

The Work Plan shall also identify the approximate timing of meetings and other activities that may require EPA participation, but are not identified in Section V of this SOW.

The schedule shall indicate that coordination meetings will initially occur on a monthly basis and may be decreased in frequency as

deemed appropriate by EPA. The coordination meetings shall address project status, problems, project risk management, solutions, contingency planning, and schedule. A representative of the East Side Performing Settling Defendants shall prepare a meeting summary to document all decisions made, issues outstanding, schedule changes, planned follow up, and assignments.

4. Contracting Strategy and Construction Process

The RD/RA Work Plan shall briefly describe the planned contracting strategy, including a brief description of the process for evaluation and approval of construction changes and EPA review and approval of significant changes. If the East Side Performing Settling Defendants propose a design/build approach, whereby the entire comprehensive all-in-one-package design and construction process is broken down into a series of discrete design-build packages, then, subject to EPA approval, the RD/RA Work Plan shall describe the contracting strategy consistent with this alternative project delivery approach.

5. Plans for Satisfying All Permitting Requirements and Acquiring Property, Leases, Easements, or Other Access.

The RD/RA Work Plan shall list all permits, property, leases, and easements required for implementation of the remedial action; permits, property, leases, and easements acquired to date; and a schedule for submittal of permit applications and acquisition of property, leases, or easements not yet obtained.

Where normally required, permits must be obtained for all off-site activities, such as from the California Department of Health Services for domestic use of treated water. East Side Performing Settling Defendants are not required to obtain permits for on-site remedial activities, but must comply with all substantive requirements, including local building codes. If permits will not be obtained for an onsite activity where a permit is normally required, East Side Performing Settling Defendants shall describe all consultative or coordination activities planned to identify and satisfy the substantive requirements. The status of permitting issues will be updated monthly in the monthly progress report to EPA.

6. Third Parties Necessary for Design, Construction, or Operation of the Remedial Action.

The RD/RA Work Plan shall describe the roles and responsibilities of East Side Performing Settling Defendants, participating water producers and water agencies, and other parties expected to play a significant role in the design, construction, or operation of the remedial action. The Work Plan shall summarize and provide copies of Memorandums of Understanding and draft or final agreements with water producers and other third parties expected to participate in implementation of the remedial action. If legally-binding agreements are not in place, the Work Plan shall describe commitments made to date and planned efforts to secure necessary commitments, including an estimated schedule. If the participation of a third party is uncertain, the Work Plan shall describe alternatives to be implemented in the event that the party does not fulfill its planned role. Possible third party roles include agreeing to the use of existing equipment (e.g., groundwater extraction wells, water treatment facilities, pipelines, groundwater recharge facilities), treatment plant operation, and acceptance of treated groundwater.

7. Identification of Any Concerns about the Quantity, Quality, Completeness, or Usability of Water Quality or Other Data Upon Which the Design Will Be Based

East Side Performing Settling Defendants shall provide a description of additional data collection efforts, if any, required for completion of the Remedial Design. This work, if any, will be initially described in the RD/RA Work Plan as one of the East Side Performing Settling Defendants' first deliverables. East Side Performing Settling Defendants shall consider whether any data are needed to verify that critical design assumptions remain valid (e.g., the areas of groundwater contamination requiring hydraulic containment). If additional data are required, East Side Performing Settling Defendants shall propose a schedule for preparation of a Sampling and Analysis Plan (or Addendum) and implementation of the Plan. The Plan shall include all appropriate efforts to evaluate additional data collected.

8. A Description of Planned Community Relations Activities to Be Conducted During Remedial Design and/or Remedial Action.

In accordance with Section XXX of the Consent Decree, East Side Performing Settling Defendants shall cooperate with EPA and the State in providing information regarding the Work to the public. As requested by EPA or the State, East Side Performing Settling Defendants shall participate in the preparation of such information for dissemination to the public and in public meetings which may be held or sponsored by EPA or the State to explain activities at or relating to the Site.

9. Updates to the RD/RA Work Plan and Periodic Reporting to EPA

The RD/RA Work Plan shall describe provisions for reporting progress to EPA (consistent with the schedule included in Section V of this SOW and the Compliance Monitoring Plan to be prepared in accordance with Section IV.G of this SOW). The RD/RA Work Plan shall also describe how the Work Plan will be updated as needed to document changes or provide information not available at the time the Work Plan is submitted.

If any of the information requested is not known at the time the RD/RA work plan must be submitted, and omitting the information from the work plan will not prevent compliance with any other requirements of this SOW, East Side Performing Settling Defendants may submit the information at a later date. If any information is omitted, East Side Performing Settling Defendants shall note in the work plan that the missing information was not available and specify when it will be submitted.

D. Remedial Design

Remedial Design activities shall include the preparation of clear and comprehensive design documents, construction plans and specifications, and other design activities needed to implement the work and satisfy Performance Criteria set forth in the IROD, ESD, and this SOW. If EPA approves use of a design/build approach, the design and construction deliverables and milestones discussed below will need to be modified, subject to EPA approval. All plans and specifications shall be developed in accordance with relevant portions of the U.S. EPA's Superfund Remedial Design/Remedial Action Handbook (EPA 540/R-95/059), and in accordance with the schedule set forth in Section V of this SOW.

221

1. Conceptual and Preliminary Design

East Side Performing Settling Defendants shall submit a combined Conceptual and Preliminary Design Report in accordance with the approved schedule, as codified in the Work Plan. EPA approval is required before proceeding with further design work, unless EPA agrees otherwise. Unless modified by EPA, the Conceptual and Preliminary Design submittal shall include or address, at a minimum, the following:

- a. A detailed Design Basis Report that presents and justifies the concepts, assumptions, standards, and preliminary interpretations and calculations used in the design. The Design Basis Report shall include:
 - (1) Volume or flow rate of water, air, and other media requiring treatment or disposal;
 - (2) A summary of water quality or other data to be used during design but not previously provided to EPA, along with an analysis of whether the data confirm assumptions, recommendations, or conclusions made to date for the EMOU;
 - (3) Assumed treatment plant influent quality over the design life of the treatment system(s), with a description of the methodology used to develop the estimate (including discussion of the likelihood and magnitude of short-term and long-term changes in influent concentrations);
 - (4) An explanation of how Performance Criteria for each aquifer zone will be met;
 - (5) Discussion of any proposed or anticipated State or Federal drinking water or ambient water quality standards that would impact the design; and whether any special circumstances may apply.
 - (6) Filtration, disinfection, corrosion control, or other treatment requirements in addition to removal of site contaminants;

202

- (7) Assumed treatment technologies and/or treatment trains (for all media and byproducts) and initial treatment process flow diagrams; appropriate equipment vendor information;
- (8) Preliminary sizing of treatment system(s) and other remedial action components;
- (9) Expected treatment facility removal capacity for all groundwater constituents requiring removal;
- (10) Delivery locations, rates, and pressures for the treated groundwater, and other conveyance system assumptions for supplying or discharging treated groundwater;
- (11) An assessment of the risk that insufficient recharge capacity may allow groundwater to leave the San Gabriel Basin and payment of make up water may be required. Provisions for alternative use of treated groundwater should be discussed;
- (12) Interconnection requirements for delivery of treated groundwater, if any (e.g., connection to existing water distribution systems);
- (13) System control strategy, including the level of reliability, redundancy, or specific damage prevention features needed in each major component of the remedial action to respond to seismic events, power outages, equipment failure, system maintenance, operator error, or deviations from design assumptions;
- (14) Listing and discussion of the relative importance of siting criteria for new extraction wells, treatment facilities, pipelines, and other facilities, along with preliminary locations and alignments; and
- (15) Estimate of the distance from each proposed extraction location to the location assumed in computer model simulations completed in support of the EMOU containment remedial actions and an evaluation of whether additional computer modeling

activities are needed to verify the effectiveness of the actual extraction locations.

- b. An Updated Construction Schedule for construction and implementation of the Remedial Action that identifies timing for initiation and completion of all critical path tasks; and
- c. An updated list of permits, regulatory agency approvals, MOUs, access or use agreements, easements, and properties developed or acquired to date; copies of permits, approvals, and agreements not previously supplied to EPA; and activities and schedules for obtaining outstanding items required before start of construction (e.g., for use of existing facilities or disposition of the treated water).
- d. Preliminary plans, specifications, and drawings, of groundwater extraction, treatment, conveyance, and monitoring systems;
- e. Listing of planned specification sections

2. Intermediate Design

Unless directed otherwise by EPA, East Side Performing Settling Defendants shall not be required to provide an Intermediate Design submittal, but may seek EPA review of design concepts or documents if desired.

3. Prefinal/Final Design

East Side Performing Settling Defendants shall submit the Prefinal Design when the design effort is complete in accordance with the approved schedule. The Prefinal Design shall fully address all comments made on the Conceptual and Preliminary Design Report (and during the Intermediate Design review, if it occurs) and, if not previously addressed, be accompanied by a memorandum indicating how the comments were incorporated into the Prefinal Design. The Prefinal Design documents shall be certified by a Professional Engineer currently registered in the State of California.

The Prefinal Design shall serve as the Final Design if EPA has no further comments and provides its approval. The Prefinal Design submittals shall include a capital and operation and maintenance

cost estimate; reproducible drawings and specifications; and a complete set of construction drawings in full and one-half size reduction. The Final Design should also include a schedule for construction completion, and satisfaction of the "Operational and Functional" criteria.

East Side Performing Settling Defendants shall not be required to provide a Final Design submittal if, subject to EPA approval, the RD/RA is implemented using a design/build approach. Instead, East Side Performing Settling Defendants shall (a) provide as-built construction drawings to EPA, (b) meet with EPA for monthly, or less frequent, subject to EPA approval, updates, after completion of the Conceptual and Preliminary Design, (c) provide copies of bid packages for subcontracted components of remedy construction to EPA for review, and (d) provide a milestone schedule for design/build activities in the RD/RA Work Plan. If requested by EPA, the East Side Performing Settling Defendants shall prepare Technical Memoranda documenting key decisions made during the design/build phase.

4. Applicability of RD Requirements to Extraction at Existing Production Wells

If East Side Performing Settling Defendants intend to use any existing purveyor-owned facilities and/or production wells as part of the southern deep zone remedial action, an agreement must be reached with the necessary water purveyors that provides for long-term extraction at the existing production wells at rates and depths sufficient to ensure compliance with the Performance Criteria in Section III of this SOW. East Side Performing Settling Defendants shall submit as-built drawings and specifications for all existing facilities and wells to be used, operating agreements, and an operation and maintenance manual in lieu of design submittals. If any new facilities or wells will be required in the southern deep zone to adequately contain the contaminated groundwater plume and meet the Performance Criteria, these should be included in the design process described above in Items 1 through 4. EPA will review the documents to evaluate the project's capability to reliably achieve the Performance Criteria described in Section III of this SOW. After completing its evaluation, EPA will indicate: i) the extent to which the project appears to be achieving Performance Criteria; and ii) any needed modifications to the project or its operation to fully satisfy Performance Criteria or ensure the project's future capability to meet Performance Criteria.

225

E. Remedial Action

East Side Performing Settling Defendants shall implement the Remedial Action. During the design period, in preparation for implementation of the Remedial Action and in accordance with the schedule included in Section V of this SOW, East Side Performing Settling Defendants shall submit a Construction Quality Assurance Plan, a Construction Health and Safety Plan, and any needed updates to the RD/RA Work Plan. The Construction Quality Assurance Plan must be reviewed and approved by EPA prior to the initiation of the Remedial Action.

Upon approval of the Final Design and Construction Quality Assurance Plan, East Side Performing Settling Defendants shall begin construction in accordance with the approved schedule. Significant field changes to the Remedial Action as set forth in the RD/RA Work Plan and Final Design shall not be undertaken without the approval of EPA. All work on the Remedial Action shall be documented in enough detail to produce as-built construction drawings after the Remedial Action is complete. Review and/or approval of submittals does not guarantee that the remedial action, when constructed, will meet the Performance Criteria.

1. Remedial Action Work Plan

East Side Performing Settling Defendants shall not be required to submit a separate Remedial Action Work Plan. Instead, East Side Performing Settling Defendants shall provide supplemental information as necessary to update the Remedial Design/ Remedial Action Work Plan.

2. Preconstruction Meeting

A Preconstruction Meeting shall be held after selection of the construction contractor but before initiation of construction. The meeting shall include East Side Performing Settling Defendants' representatives and interested federal, state and local government agency personnel; shall define the roles, relationships, and responsibilities of all parties; review work area security and safety protocols; review any access issues; review construction schedule; and review construction quality assurance procedures.

East Side Performing Settling Defendants shall ensure that the results of the Preconstruction Meetings are documented and transmitted to all parties in attendance, including the names of

people in attendance, issues discussed, clarifications made, and instructions issued.

3. Remedial Action Construction

East Side Performing Settling Defendants shall implement the Remedial Action as detailed in the approved RD/RA Work Plan (as updated) and approved Final Design.

4. Prefinal Construction Inspection

Within fourteen (14) days after East Side Performing Settling Defendants believe that construction is complete and the remedial action, or a discrete portion of the remedial action, is operational and functional, East Side Performing Settling Defendants shall notify EPA and the State for the purposes of conducting a prefinal inspection to be attended by EPA and East Side Performing Settling Defendants. Other participants shall include the Project Coordinator and other federal, state, and local agencies with a jurisdictional interest. If a Prefinal Construction Inspection is held for a portion of the remedial action, one or more additional inspections shall be conducted so that the entire remedial action is inspected.

The objective of the inspection(s) is to determine whether construction is complete and the remedial action (or the inspected portion) is operating as designed. Any outstanding construction items discovered during the inspection shall be identified and corrected and noted on a bullet list. East Side Performing Settling Defendants shall certify that the equipment is effectively meeting the purpose and intent of the specifications. Retesting shall be completed where deficiencies are revealed. A Prefinal Construction Inspection Report shall be submitted by East Side Performing Settling Defendants that outlines the outstanding construction items, actions required to resolve the items, completion date for the items, and an anticipated date for a Final Inspection. The Prefinal Construction Inspection Report can be in the form of a bullet list or letter or Technical Memorandum.

5. Final Construction Inspection

Within fourteen (14) days after completion of any work identified in the prefinal inspection report, East Side Performing Settling Defendants shall notify EPA and the State for the purposes of

conducting a final inspection. The final inspection shall consist of a walk-through inspection by EPA and East Side Performing Settling Defendants. The prefinal inspection report shall be used as a checklist with the final inspection focusing on the outstanding construction items identified in the prefinal inspection. Confirmation shall be made that outstanding items have been resolved.

Any outstanding construction items discovered during the inspection still requiring correction shall be identified, photographed if possible, and noted on a punch list. If any items are still unresolved, the inspection shall be considered to be a Prefinal Construction Inspection requiring another Prefinal Construction Inspection Report and subsequent Final Construction Inspection.

6. Remedial Action Construction Report

As specified in the approved schedule included in Section V of this SOW, after construction is completed on the entire remedial action and the systems are operating as designed, East Side Performing Settling Defendants shall submit a Remedial Action Construction Report. In the report, a registered Professional Engineer and East Side Performing Settling Defendants' Project Coordinator shall state that the construction of the Remedial Action has been completed in accordance with the RD/RA Work Plan submitted under this SOW. The written report shall provide a synopsis of the work defined in this SOW, describe deviations from the RD/RA Work Plan, include as-built drawings signed and stamped by a licensed Professional Engineer, provide actual costs of the Remedial Action (and O&M to date), and provide a summary of the results of operational and performance monitoring completed to date. The report shall contain the following statement, signed by a responsible corporate official of the East Side Performing Settling Defendants or the East Side Performing Settling Defendants' Project Coordinator:

"To the best of our knowledge, after thorough investigation, we certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

7. Interim Remedial Action Report

As specified in the approved schedule included in Section V of this SOW, after East Side Performing Settling Defendants have

determined that the performance criteria of the remedial action are being met, East Side Performing Settling Defendants shall submit an Interim Remedial Action Report pursuant to EPA 540-R-98-016, OSWER Directive 9320.2-09A-P "Close Out Procedures for National Priorities List Sites", January 2000. In the report, a registered Professional Engineer and East Side Performing Settling Defendants' Project Coordinator shall certify that the Interim Remedial Action is "operational and functional" as intended and that performance criteria listed in Section III of this SOW are being met. The written report shall provide a summary of the results of operational and performance monitoring completed to date and shall provide documentation to substantiate the East Side Performing Settling Defendants' certification in full satisfaction with the Consent Decree, including, but not limited to, relevant data presented in accordance with Sections IV.J (Performance Evaluation Reports) and IV.L (Compliance Monitoring Reports) of this SOW. The report shall also summarize deviations from the RD/RA Work Plan and shall contain the following statement, signed by a responsible corporate official of the East Side Performing Settling Defendants or the East Side Performing Settling Defendants' Project Coordinator:

"To the best of our knowledge, after thorough investigation, we certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

F. Operation and Maintenance

Operation and Maintenance (O&M) shall be performed in accordance with the approved Operation and Maintenance Manual.

1. Operation and Maintenance Plan

East Side Performing Settling Defendants shall not be required to submit an Operation and Maintenance (O&M) Plan. O&M-related information shall be provided in the O&M Manual (see Section IV.F.2 of this SOW) and/or the Compliance Monitoring Plan (see Section IV.G of this SOW).

2. Operation and Maintenance Manual

East Side Performing Settling Defendants shall submit a draft Operation and Maintenance Manual during the design period in accordance with the approved schedule, and a revised draft after the final construction inspection to incorporate manufacturer/vendor information and any design modifications implemented during the Remedial Action. The Operation and Maintenance Manual must be reviewed and approved by EPA. The manual shall include all necessary Operation and Maintenance information for the operating personnel, and provide or address the following:

- a. System description;
- b. Startup and shutdown procedures;
- c. Criteria for determining when the remedial action is "operational and functional"
- d. Description and schedule of normal operation and maintenance tasks, including equipment and material requirements, anticipated equipment replacement for significant components, availability of spare parts, provisions for remote monitoring and control, operator training and certification requirements, staffing needs, and related requirements;
- e. Indicators of system performance and/or maintenance (e.g., parameters to be monitored to determine timing for activated carbon or ion exchange resin replacement or to assess biological reactor performance);
- f. Criteria to be used to determine whether the treated groundwater will be supplied to one or the other of the available alternative discharge options approved by EPA;
- g. Any planned variation in groundwater extraction rate, including whether each extraction well is to be operated at constant or variable flow rate, and a description of the magnitude and timing of any expected variation;

- h. Record keeping and reporting requirements, including operating and inspection logs, maintenance records, and periodic reports; and
 - i. Description and analysis of potential operating problems (e.g., equipment failure, higher than expected contaminant concentrations), including emergency operating and response activities and relevant health and safety information.
- 3. Applicability of O&M Requirements to Extraction at Production Wells in the southern deep zone of the EMOU

See Section IV.D.4 of this SOW.

G. Compliance Monitoring Plan

Compliance monitoring activities shall be performed in accordance with the approved Compliance Monitoring Plan, to evaluate whether the Performance Criteria, as described in Section III of this SOW, in the ESD, and in the IROD, are met. The Compliance Monitoring Plan shall specify the locations of compliance wells and any sentinel wells, sampling methods, and, at a minimum, a quarterly sampling frequency. East Side Performing Settling Defendants shall submit the Compliance Monitoring Plan no later than the specified date in the approved schedule. Compliance with the Performance Criteria will be confirmed by results from sampling at EPA-approved compliance wells on a quarterly basis, and shall be documented in Compliance Monitoring Reports. EPA shall be notified of noncompliance with any Performance Criteria within 5 days of receipt of data verifying noncompliance. In addition East Side Performing Settling Defendants shall collect appropriate confirmation samples within 10 days of receipt of data indicating potential noncompliance (for example, after the first exceedance of Performance Criteria at a compliance well). The Compliance Monitoring Plan shall address the following requirements:

1. Data Collection Parameters

East Side Performing Settling Defendants shall specify the locations of compliance and sentinel wells in the shallow and deep groundwater zones. Such wells shall comply with

and be adequate to meet the Performance Criteria. The Compliance Monitoring Plan shall contain sufficient information for EPA to assess whether the compliance and sentinel wells meet Performance Criteria. East Side Performing Settling Defendants shall specify sampling methods, data analysis procedures, and, at a minimum, a quarterly sampling frequency.

2. Computer Modeling

East Side Performing Settling Defendants may be required by EPA to perform computer model simulations of groundwater flow and contaminant migration as part of compliance monitoring or to evaluate modifications to the extraction plan, if needed. The Compliance Monitoring Plan shall describe proposed changes to the calibration of an existing model, or propose a schedule for providing such information. All models must be calibrated by East Side Performing Settling Defendants and approved by EPA prior to use. If modeling work is performed, wells that are not considered part of the remedial action, but which do cause hydraulic influence, will be accounted for in the modeling simulations.

Subject to approval by EPA, East Side Performing Settling Defendants may propose alternative methods of evaluating whether the remedy is achieving the compliance performance objectives, and, if needed, the nature and scope of modifications to the extraction plan.

3. Split Sampling

The Compliance Monitoring Plan shall specify procedures for coordination of EPA or State collection of split or replicate samples.

4. Contingency Action

The Compliance Monitoring Plan shall propose contingency plans to be used in the event that additional compliance monitoring activities are required to evaluate compliance with Performance Criteria. Contingency actions could include increases in monitoring frequency and installation of additional groundwater monitoring wells, as approved by

EPA. If compliance monitoring data indicate noncompliance, East Side Performing Settling Defendants shall submit a Compliance Action Plan to EPA within 14 days of receipt of data verifying noncompliance. Actions may include, but not necessarily be limited to, additional compliance monitoring to confirm the finding, operational modifications followed by additional compliance monitoring, or design and construction efforts for additional extraction activities.

5. Data Reporting

The Compliance Monitoring Plan shall propose electronic reporting formats to support submittal of all groundwater data to EPA.

H. Monitoring Plan(s) for Other Potential Remedial Actions

If East Side Performing Settling Defendants propose to use passive remedial actions at certain locations, and these actions are shown to be capable of compliance with applicable Performance Criteria, then East Side Performing Settling Defendants must monitor these locations in accordance with an EPA-approved monitoring plan.

I. General Monitoring Plan

Monitoring activities for wells other than the compliance and sentinel wells shall be performed in accordance with the approved General Monitoring Plan. The plan shall specify type, locations, frequencies, methods, and duration of monitoring activities. East Side Performing Settling Defendants shall submit the General Monitoring Plan no later than the date specified in the approved schedule. The General Monitoring Plan shall address the following requirements:

1. Data Collection Parameters

A description of the types of data to be collected, sampling and data gathering methods, monitoring locations, sampling frequencies, and if appropriate, minimum monitoring duration.

2. Well Discharge

East Side Performing Settling Defendants shall measure flow rates at each extraction well (and calculate volumes of water extracted) as a function of time, using a meter/totalizer installed on the discharge pipe for each extraction well. The reading on the meter/totalizer shall be recorded at least quarterly and whenever water quality samples are collected from that well.

3. Treatment Plant Effluent/Treated Groundwater

East Side Performing Settling Defendants shall analyze treated water samples to verify attainment of groundwater treatment goals (i.e., at a minimum, MCLs, as stated in the discharge limits) and monitor operational parameters that are used as indicators of treatment facility performance or the need for maintenance. East Side Performing Settling Defendants shall propose appropriate parameters and schedules for sampling of treated groundwater to ensure compliance with ARARs. After a period of initial monitoring, East Side Performing Settling Defendants may propose criteria for subsequent reductions in sampling and/or analysis frequencies if the sampling results support such reductions.

4. Contaminant Mass Removal

Though mass removal is not one of EPA's remedy performance criteria described in Section III of this SOW, East Side Performing Settling Defendants shall track the cumulative mass of contaminants removed from the aquifer. The contaminants to be monitored for contaminant mass removal calculations, the rationale for their selection, and the frequency of these calculations, will be described in the General Monitoring Plan, subject to EPA approval.

5. Aquifer Testing

East Side Performing Settling Defendants shall perform aquifer tests at new extraction wells to estimate aquifer transmissivity in the vicinity of the wells.

6. Air Emissions Monitoring

If applicable, East Side Performing Settling Defendants shall perform air emission monitoring to verify that air emissions from treatment operations do not exceed ARARs.

7. Data Analysis and Reporting

The General Monitoring Plan shall also describe how the performance data will be analyzed, interpreted, and reported to evaluate compliance with ARARs. All data shall be submitted by the deadlines specified in an agreed upon schedule. Claims of change, difference, or trend in water quality or other parameters (e.g., between observed values and an ARAR) shall include the use of appropriate statistical concepts and tests.

All analytical data, whether or not validated, shall be submitted to EPA within 60 calendar days of sample shipment to the laboratory or 14 days of receipt of analytical results from the laboratory, whichever occurs first. All analytical data, previously validated and in electronic format in an approved data structure, shall be submitted within 90 calendar days of the sample shipment to the laboratory. Well construction information shall be submitted at the completion of the initial sampling activities or within 90 days after completion of a well, whichever is earlier.

8. Split Sampling

The General Monitoring Plan shall also specify procedures for coordination of EPA or State collection of split or replicate samples.

9. Reporting Requirements to Support the Compliance Monitoring Plan and General Monitoring Plan

The General Monitoring Plan shall provide a brief description of the contents and format for the Quarterly Compliance Monitoring Reports and Performance Evaluation Reports (see below).

EPA may also request periodic updates of selected deliverables (e.g., Work Plan, Sampling Plan, Monitoring

Plans, etc.) described in this section of the SOW, as more information is gathered or as conditions change during implementation of the RD/RA.

J. Performance Evaluation Reports

Performance Evaluation Reports shall include: summaries of compliance monitoring activities conducted since the previous reporting period (including summaries of Compliance Monitoring Reports); updated water level contour maps showing measured water levels, including capture zones for extraction wells; field data to demonstrate hydraulic control; measured contaminant concentrations and associated contour maps; the interpreted extent of contamination; and appropriate groundwater modeling results used to confirm compliance, including a detailed description and explanation of improvements made to the computer model of groundwater flow and contaminant migration in the preceding year and the resulting calibration; summaries of relevant operating and field data, including mass removal; any preliminary calculations and supporting data used to evaluate compliance; descriptions of the nature of, duration of, and response to any noncompliance; and any other requirements outlined in the General Monitoring Plan and the Compliance Monitoring Plan.

Initially, at a minimum, individual contaminant contour maps shall be prepared indicating the extent of PCE, TCE (shallow and deep zones), perchlorate, 1,4-dioxane, NDMA, and hexavalent chromium (shallow zone) contamination. Additional contour maps shall be prepared if requested by EPA to indicate the extent of contamination in additional depth intervals, or for additional contaminants. Assumptions made in excluding, truncating, averaging, or otherwise selecting or manipulating the data to be used in preparing the contour maps should be clearly stated. Performance Evaluation Reports shall be provided as described in Section V of this SOW.

K. Progress Reports

East Side Performing Settling Defendants shall submit reports on progress of work required under the Consent Decree and this SOW. These progress reports shall provide information as required by Section X of the Consent Decree, except where such information is presented in other reports submitted regularly as required under this SOW, and will be due monthly, as described in Section V of this

236

SOW. The frequency of progress reports may be decreased in the future if the progress of work support such a decrease, and East Side Performing Settling Defendants obtain EPA approval. Standard format reporting can be used, with the ultimate goal of making the Progress Reports standardized, and adopting a compliance management by exception style.

L. Compliance Monitoring Reports

The Compliance Monitoring Reports shall include: measured contaminant concentrations at compliance wells; charts showing contaminant concentrations versus time at compliance wells; assessments and statements regarding whether Performance Criteria have been exceeded at compliance wells; predictions, if appropriate, of possible future occurrences of noncompliance; any relevant preliminary calculations and supporting data used to evaluate compliance; and any other relevant requirements outlined in the Compliance Monitoring Plan. Compliance Monitoring Reports will be due every three months, as described in Section V of this SOW. The frequency of compliance monitoring reports may be decreased in the future if the monitoring data support such a decrease, and East Side Performing Settling Defendants obtain EPA approval. The reports may be presented in a graphical format.

M. Supporting Plans

1. Sampling and Analysis Plan and Health and Safety Plan

Sampling and Analysis Plan. In accordance with Sections VIII of the Consent Decree, East Side Performing Settling Defendants shall prepare a Sampling and Analysis Plan (SAP), or update an existing Plan to perform compliance and general monitoring and carry out any other field investigations needed to complete the remedial design, and construct and operate the remedial action. The Plan shall discuss the timing of data collection activities, including data collection activities needed to establish baseline conditions before startup of the remedial action.

The SAP shall include a Field Sampling and Analysis Plan (FSAP), a Quality Assurance Project Plan (QAPP), and a schedule for implementation of all field activities including but not limited to well installation, sampling, analysis, and reporting activities. The FSAP and QAPP may be submitted

as one document or separately, and may reference an existing FSAP or QAPP. Upon EPA approval, East Side Performing Settling Defendants shall proceed to implement the sampling activities described in the SAP.

- a. The FSAP shall describe sampling objectives, analytical parameters, sample locations and frequencies, sampling equipment and procedures, sample handling and analysis, management of investigation-derived wastes, and planned uses of the data. The FSAP shall be consistent with "Preparation of a U.S. EPA Region 9 Field Sampling Plan for Private and State-Lead Superfund Projects" (Document Control No. 9QA-06-89, April 1990), and other applicable guidance. It shall be written so that a field sampling team unfamiliar with the project would be able to gather the samples and field information required. The FSAP shall include a description of the arrangements for disposal of investigation-derived waste.
- b. The QAPP shall describe project objectives, organizational and functional activities, data quality objectives (DQOs), and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The QAPP shall be consistent with "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations" (EPA QA/R-5, November 1999), and "Guidance for the Data Quality Objectives Process" (EPA QA/G-4, September 1994) and other applicable guidance (see list of references). The DQOs shall, at a minimum, reflect use of analytical methods for obtaining data of sufficient quality to meet National Contingency Plan requirements as identified at 40 CFR 300.435 (b). In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, document control procedures, preservation of records (see Sections VIII, XXIV, and XXV of the Consent Decree), data reduction, data validation, data management, procedures that will be used to enter, store, correct, manipulate, and

analyze data; protocols for transferring data to EPA in electronic format; and document management.

East Side Performing Settling Defendants shall demonstrate in advance and to EPA's satisfaction that each laboratory they may use is qualified to conduct the proposed work and meets the requirements specified in Section VIII of the Consent Decree. EPA may require that East Side Performing Settling Defendants submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment and material specification, and laboratory analyses of performance samples (blank and/or spike samples). In addition, EPA may require submittal of data packages equivalent to those generated by the EPA contract laboratory program (CLP).

Health and Safety Plan. To ensure protection of on-site personnel and area residents from hazards posed by sampling activities, East Side Performing Settling Defendants shall also develop a Health and Safety Plan (or update an existing Plan). The Plan shall be in conformance with U.S. Occupational, Safety, and Health Administration (OSHA) requirements as outlined in 29 CFR §§1910 and 1926, and any other applicable requirements. The Health and Safety Plan shall describe health and safety risks, employee training, monitoring and personal protective equipment, medical monitoring, levels of protection, safe work practices and safeguards, contingency and emergency planning, and provisions for site control. EPA will review but will neither approve nor disapprove East Side Performing Settling Defendants' Health and Safety Plan.

2. Construction Quality Assurance Plan

East Side Performing Settling Defendants shall develop and implement a Construction Quality Assurance Plan to ensure, with a reasonable degree of certainty, that the completed Remedial Action meets or exceeds all design criteria, plans and specifications, and Performance Standards. The Construction Quality Assurance Plan shall include the following elements:

- a. Responsibilities and authorities of all organizations and key personnel involved in the design and construction of the Remedial Action;
- b. A description of the quality control organization, including a chart showing lines of authority, members of the Quality Assurance team, their responsibilities and qualifications, and acknowledgment that the Quality Assurance team will implement the quality control system for all aspects of the work specified and shall report to the East Side Performing Settling Defendants' Project Coordinator and EPA. Members of the Quality Assurance team shall have a good professional and ethical reputation, previous experience in the type of QA/QC activities to be implemented, and demonstrated capability to perform the required activities. They shall also be independent of the construction contractor;
- c. Description of the observations, inspections, and control testing that will be used to assure quality workmanship, verify compliance with the plans and specifications, or meet other QC objectives during implementation of the Remedial Action. This includes identification of sample size, sample locations, and sample collection or testing frequency; and acceptance and rejection criteria. The Plan shall specify laboratories to be used, and include information which certifies that personnel and laboratories performing the tests are qualified and the equipment and procedures to be used comply with applicable standards;
- d. Reporting procedures, frequency, and format for QA/QC activities. This shall include such items as daily summary reports, inspection data sheets, problem identification and corrective measures reports, design acceptance reports, and final documentation. Provisions for the final storage of all records shall be presented in the Construction Quality Assurance Plan. The QA official shall report simultaneously to the East Side Performing Settling Defendants' representative and to EPA; and

- e. A list of definable features of the work to be performed. A definable feature of work is a task which is separate and distinct from other tasks and has separate quality control requirements.

3. Construction Health and Safety Plan

East Side Performing Settling Defendants shall prepare a Construction Health and Safety Plan in compliance with OSHA regulations and protocols and other applicable requirements. The Construction Health and Safety Plan shall describe health and safety risks, employee training, monitoring and personal protective equipment, medical monitoring, individuals responsible in an emergency, and provisions for site control for workers and for visitors to the job site. EPA will review but neither approve nor disapprove East Side Performing Settling Defendants' Construction Health and Safety Plan.

N. Work Complete Report

As specified in the approved schedule included in Section V of this SOW, after all phases of the Work (including O&M) under the Consent Decree have been performed, East Side Performing Defendants shall submit a Work Complete Report. In the report, a registered Professional Engineer and East Side Performing Settling Defendants' Project Coordinator shall state that the Work has been completed in full satisfaction of the requirements of the Consent Decree. The written report shall provide a synopsis of the work defined in this SOW, describe deviations from the RD/RA Work Plan, provide actual costs of the Remedial Action (and O&M), and provide a summary of the results of operational and performance monitoring completed. The report shall contain the following statement, signed by a responsible corporate official of the East Side Performing Settling Defendants or the East Side Performing Settling Defendants' Project Coordinator:

"To the best of our knowledge, after thorough investigation, we certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

V. Schedule for Major Deliverables and Other Tasks [Note: schedule to be revised as necessary to account for work completed prior to Consent Decree]

This schedule assumes a Design-Build approach will be utilized.

ACTIVITY	
Lodging Date of the Consent Decree	
Notification of Project Coordinator (as required by Section XII of the Consent Decree)	Twenty (20) days after the lodging date of the Consent Decree
PLANNING DOCUMENTS	
Compliance and Sentinel Well Network Plan	<p>Ninety (90) days after the lodging date of the Consent Decree</p> <p>(EPA review time of 14 days) ¹</p> <p>If necessary, revised Plan due 21 days after receipt of EPA comments</p>
Select Contractor and Initiate Compliance and Sentinel Well Installation	Thirty (30) days after EPA approval of Compliance and Sentinel Well Network Plan
Compliance and Sentinel Well Installation Report	<p>Seventy five (75) days after completion of compliance and sentinel installation activities</p> <p>(EPA review time of 14 days) ¹</p> <p>If necessary, revised Plan due 21 days after receipt of EPA comments</p>

ACTIVITY	DUE DATE
Compliance and Sentinel Well Network Monitoring Plan	<p>Forty five (45) days after EPA approval of Compliance and Sentinel Well Installation Report</p> <p>(EPA review time of 21 days)¹</p> <p>If necessary, revised plan due 21 days after receipt of EPA comments</p>
RD/RA Work Plan	<p>Forty five (45) days after EPA approval of Compliance and Sentinel Well Installation Report</p> <p>(EPA review time of 21 days)¹</p> <p>If necessary, revised plan due 21 days after receipt of EPA comments</p>
General Monitoring Plan	<p>Sixty (60) days after EPA approval of Conceptual and Preliminary Design Submittal</p> <p>(EPA review time of 30 days)¹</p> <p>If necessary, revised plan due 21 days after receipt of EPA comments</p>
REMEDIAL DESIGN	
Notification of Supervising Contractor (as required by Section VI of the Consent Decree)	<p>Ninety days (90) days after the lodging date of the Consent Decree</p> <p>(EPA review time of 14 days)¹</p> <p>If necessary, revised contractor list due 30 days after receipt of EPA comments</p>
RD/RA Work Plan	Update, as necessary
Conceptual and Preliminary Remedial Design Submittal	<p>Ninety (90) days after approval of RD/RA Work Plan</p> <p>(EPA review time of 28 days)¹</p> <p>If necessary, revised plan due 28 days after receipt of EPA comments</p>

ACTIVITY	TIME FRAME
Intermediate Remedial Design Submittal	Not required
Construction Bid Packages	Sixty (60) days after EPA approval of Conceptual and Preliminary Design Submittal (EPA review time of 28 days) ¹
As Built Construction Drawings	Concurrent with Remedial Action Construction Report (EPA review time of 14 days) ¹
REMEDIAL ACTION	
Selection of Construction Sub Contractor(s)	Sixty (60) days after issuance of bid packages
Notification of Selected Construction Sub Contractor(s)	Within 5 days of selection
Pre-Construction Meeting	Twenty one (21) days after selection of construction sub contractors
Initiate Construction	Fourteen (14) days after Pre-Construction Meeting
Complete Construction	Per milestone schedule in EPA approved Conceptual and Preliminary Design submittal
Pre-Final Construction Inspection	Fourteen (14) days after East Side Performing Settling Defendants determine that the remedial action is operating as designed
Pre-Final Construction Inspection Report	Fourteen (14) days after Pre-final Construction Inspection

ACTIVITY	DUE DATE
Final Construction Inspection (if needed)	To be defined in the Pre-Final Construction Inspection Report
Final Construction Inspection Report (if needed)	Fourteen (14) days after Final Construction Inspection
Remedial Action Construction Report	<p>Draft due sixty (60) days after EPA approval of Pre-Final/Final Construction Inspection Report</p> <p>(EPA review time of 28 days)¹</p> <p>If needed, revised Report due 28 days after receipt of EPA comments</p>
Interim Remedial Action Report	<p>Draft due two hundred and seventy (270) days after EPA approval of the Remedial Action Construction Report or fourteen (14) days after East Side Performing Settling Defendants determine that performance criteria for the remedial action are being met, whichever is earlier</p> <p>(EPA review time of 28 days)¹</p> <p>If needed, revised Report due 28 days after receipt of EPA comments</p>
OPERATION AND MAINTENANCE	
Operation and Maintenance Manual	<p>Draft Manual due 14 days after Pre-Final/Final Construction Inspection</p> <p>If requested by EPA, revised Manual due 21 days after receipt of EPA comments</p>

ACTIVITY DUE DATE	
PERFORMANCE EVALUATION	
Performance Evaluation Reports	Due every 6 months, for first three years, and annually thereafter following EPA's approval of Remedial Action Construction Report
Progress Reports	Due monthly, beginning thirty (30) days after the lodging date of the Consent Decree
Quarterly Compliance and Sentinel Well Network Monitoring Reports	Per schedule in the EPA approved Compliance and Sentinel Well Network Monitoring Plan
Non-compliance Notification	Due seven (7) days after receipt of information indicating non-compliance
Compliance Action Plan	Draft due fourteen (14) days after receipt of information indicating non-compliance
Compliance Correction Report	As established in an EPA approved Compliance Action Plan
SUPPORTING PLANS	
Sampling and Analysis Plan	No later than the date of the Conceptual and Preliminary Remedial Design submittal
Site Health and Safety Plan	No later than the date of the Conceptual and Preliminary Remedial Design submittal
Construction Quality Assurance Plan, Construction Health and Safety Plan	Concurrent with Conceptual and Preliminary Design Submittal

ACTIVITY	DUE DATE
OBLIGATIONS REQUIRED BY SETTLEMENT AND CONSENT DECREE	
Pre-Certification Inspection for Completion of the Work	Forty-five (45) days after East Side Performing Settling Defendants conclude that all Work has been performed, including completion of all Operation and Maintenance activities
Certification that all Work has been Completed	Thirty (30) days after the pre-certification inspection

1. Estimated time, in calendar days. Failure to review a deliverable within the estimated time shall not constitute a violation of the Consent Decree by the United States.

This schedule assumes a Design-Bid-Build approach will be utilized.

ACTIVITY	DUE DATE
Lodging Date of the Consent Decree	
Notification of Project Coordinator (as required by Section XII of the Consent Decree)	Twenty (20) days after the lodging date of the Consent Decree
PLAN REVIEW REQUIREMENTS	
Compliance and Sentinel Well Network Plan	<p>Ninety (90) days after the lodging date of the Consent Decree</p> <p>(EPA review time of 14 days) ¹</p> <p>If necessary, revised Plan due 21 days after receipt of EPA comments</p>
Select Contractor and Initiate Compliance and Sentinel Well Installation	Thirty (30) days after EPA approval of Compliance and Sentinel Well Network Plan
Compliance and Sentinel Well Installation Report	<p>Seventy five (75) days after completion of compliance and sentinel installation activities</p> <p>(EPA review time of 14 days) ¹</p> <p>If necessary, revised Report due 21 days after receipt of EPA comments</p>
Compliance and Sentinel Well Network Monitoring Plan	<p>Forty five (45) days after EPA approval of Compliance and Sentinel Well Installation Report</p> <p>(EPA review time of 21 days) ¹</p> <p>If necessary, revised Plan due 21 days after receipt of EPA comments</p>

ACTIVITY	
RD/RA Work Plan	<p>Forty five (45) days after EPA approval of the Compliance and Sentinel Well Installation Report</p> <p>(EPA review time of 21 days)¹</p> <p>If necessary, revised plan due 21 days after receipt of EPA comments</p>
General Monitoring Plan	<p>Sixty (60) days after EPA approval of Conceptual and Preliminary Design Submittal</p> <p>(EPA review time of 30 days)¹</p> <p>If necessary, revised plan due 21 days after receipt of EPA comments</p>
REMEDIAL DESIGN	
Notification of Supervising Contractor (as required by Section VI of the Consent Decree)	<p>Ninety (90) days after the lodging date of the Consent Decree</p> <p>(EPA review time of 14 days)¹</p> <p>If necessary, revised contractor list due 30 days after receipt of EPA comments</p>
RD/RA Work Plan	Update, as necessary
Conceptual and Preliminary Remedial Design Submittal	<p>One hundred twenty (120) days after approval of RD/RA Work Plan</p> <p>(EPA review time of 28 days)¹</p> <p>If necessary, revised design due 28 days after receipt of EPA comments</p>
Intermediate Remedial Design Submittal	Not required
Pre-Final Remedial Design Submittal	<p>One hundred twenty (120) days after EPA approval of Conceptual and Preliminary Design Submittal</p> <p>(EPA review time of 28 days)¹</p>
Final Remedial Design submittal (if needed)	Twenty one (21) days after EPA approval of Pre-Final Remedial Design Submittal

REMEDIAL ACTION	
Selection of Construction Contractor	Sixty days (60) days after EPA approval of Pre-Final/Final Remedial Design Submittal
Notification of Selected Construction Contractor	Within 5 days of selection
Pre-Construction Meeting	Fourteen (14) days after EPA approval of selected construction contractor
Initiate Construction	Fourteen (14) days after Pre-Construction Meeting
Complete Construction	Per milestone schedule in EPA approved Pre-Final/Final Design Submittal
Pre-Final Construction Inspection	Fourteen (14) days after East Side Performing Settling Defendants determine that the remedial action is operating as designed
Pre-Final Construction Inspection Report	Fourteen (14) days after Pre-Final Construction Inspection
Final Construction Inspection (if needed)	To be defined in the Pre-Final Construction Inspection Report
Final Construction Inspection Report (if needed)	Fourteen (14) days after Final Construction Inspection
Remedial Action Construction Report	Draft due sixty (60) days after EPA approval of Pre-Final/Final Construction Inspection Report (EPA review time of 28 days) ¹ If needed, revised Report due 28 days after receipt of EPA comments

ACTIVITY	DUE DATE
Interim Remedial Action Report	<p>Draft due two hundred and seventy (270) days after EPA approval of the Remedial Action Construction Report or fourteen (14) days after East Side Performing Settling Defendants determine that performance criteria for the remedial action are being met, whichever is earlier</p> <p>(EPA review time of 28 days)¹</p> <p>If needed, revised Report due 28 days after receipt of EPA comments</p>
OPERATION AND MAINTENANCE	
Operation and Maintenance Manual	<p>Draft Manual due 14 days after pre-Final/Final Construction Inspection</p> <p>If requested by EPA, revised Manual due 21 days after receipt of EPA comments</p>
PERFORMANCE EVALUATION	
Performance Evaluation Reports	Due every 6 months for first three years, and annually thereafter following EPA approval of Remedial Action Construction Report
Progress Reports	Due monthly, beginning thirty (30) days after the lodging date of the Consent Decree
Quarterly Compliance and Sentinel Well Network Monitoring Reports	Per schedule in the EPA approved Compliance and Sentinel Well Network Monitoring Plan
Non-compliance Notification	Due seven (7) days after receipt of information indicating non-compliance
Compliance Action Plan	Draft due fourteen (14) days after receipt of information indicating non-compliance
Compliance Correction Report	As established in an EPA approved Compliance Action Plan

ACTIVITY		DUE DATE	
SUPPORTING PLANS			
Sampling and Analysis Plan		No later than the date of the Conceptual and Preliminary Remedial Design submittal	
Site Health and Safety Plan		No later than the date of the Conceptual and Preliminary Remedial Design submittal	
Construction Quality Assurance Plan, Construction Health and Safety Plan		No later than the date of the Pre-final/Final Remedial Design Submittal	
CERTIFICATION WORKS REQUIRED BY SECTION 4.2 OF CONSENT DECREE			
Pre-Certification Inspection for Completion of the Work		Forty-five (45) days after East Side Performing Settling Defendants conclude that all Work has been performed, including completion of all Operation and Maintenance activities	
Certification that all Work has been Completed		Thirty (30) days after the pre-certification inspection	

1. Estimated time, in calendar days. Failure to review a deliverable within the estimated time shall not constitute a violation of the Consent Decree by the United States.

VI. References

The following list, although not comprehensive, provides citations for many of the regulations and guidance documents that apply to the RD/RA process. East Side Performing Settling Defendants shall review these guidance documents and shall use the information provided therein in performing the RD/RA and preparing all deliverables under this SOW.

"National Oil and Hazardous Substances Pollution Contingency Plan, Final Rule," 40 CFR, Part 300.

"Superfund Remedial Design/ Remedial Action Handbook," U.S. EPA, Office of Emergency and Remedial Response, June 1995 (EPA 540/R-95/059).

"Interim Final Guidance on Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties," U.S. EPA, Office of Emergency and Remedial Response, February 14, 1990, OSWER Directive No. 9355.5-01.

"EPA NEIC Policies and Procedures Manual," U.S. EPA, May 1978, revised May 1986.

"Guidance for the Data Quality Objectives Process" U.S. EPA, (EPA QA/G-4).

"EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations," May 1994, U.S. EPA, (EPA QA/R-5).

"Guidance for Quality Assurance Project Plans," February 1998, U.S. EPA, (EPA QA/G-5).

"Preparation of a U.S. EPA Region 9 Field Sampling Plan for Private and State-Lead Superfund Projects," April 1990, U.S. EPA, (No. 9QA-06-89).

"Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites," U.S. EPA, Office of Emergency and Remedial Response, (Draft), OSWER Directive No. 9283.1-2.

"Methods for Monitoring Pump-and-Treat Performance," U.S. EPA, Office of Research and Development, June 1994 (EPA 600/R-94/123).

Figure 1
(pdf file)

El Monte OU

Approximate Post-RI/FS

Well Locations

Table 1
(pdf file)

El Monte OU

Water Quality Data

Early Response Action Program Monitoring

Attachment 1

June 1999 Interim Record of Decision

(See Appendix A to the Consent Decree)

Attachment 2

Explanation of Significant Differences (ESD)

(See Appendix B to the Consent Decree)

250

Attachment 3

Summary of Pre-Remedial Design Work

El Monte Operable Unit

Following completion of the RI/FS, the Northwest El Monte Community Task Force (NEMCTF) performed preliminary remedial design (pre-RD) work at the Site. This work, associated with the NEMCTF's Early Response Action Program (ERAP), included the following: (1) installation and sampling of eight monitoring wells in late 1998/early 1999 and preparation of an ERAP monitoring well completion report, (2) five rounds of groundwater sampling, one in December 1998/January 1999, one in September 1999, one in June 2000, one in November 2000, and one in August 2001, at selected RI, ERAP, and facility monitoring wells, including analysis for perchlorate, 1,4-dioxane, and NDMA, (3) preparation of a report evaluating discharge options for water produced from extraction wells completed in the shallow zone, (4) groundwater modeling to assist in locating shallow zone extraction wells, (5) installation, aquifer testing, and sampling of three shallow extraction wells in the western EMOU in the summer of 2000, (6) installation and sampling of two shallow zone compliance wells in the western EMOU in the Spring of 2001, and (7) installation of a third shallow zone compliance well in the western EMOU in the Spring of 2002. The following, associated, documents were prepared by Camp Dresser and McKee (CDM) on behalf of the NEMCTF:

"Sampling and Analysis Plan, Phase 1 Early Response Action Program, El Monte Operable Unit, San Gabriel Valley, Los Angeles County, California," August 31, 1998.

"EMOU Early Response Action Program, Contaminant Transport Modeling, Proposed Western Shallow Zone Extraction Well Locations," December 10, 1999.

"Phase 1A Early Response Action Program Report of Well Installations and Round 5 Groundwater Monitoring, El Monte Operable Unit, San Gabriel Valley, Los Angeles County, California," February 15, 2000

"Discharge Options Study Report, El Monte Operable Unit, San Gabriel Valley, Los Angeles County, California," May 8, 2000.

Figure 1 of the SOW depicts the approximate locations of the fourteen ERAP (pre-RD, post-RI/FS) wells: eight monitoring wells (ERP-1 to ERP-8), three shallow zone extraction wells (EW-18, EW-19, and EW-20), and three shallow zone compliance wells (ERP-9, ERP-10, and ERP-11). Extraction wells EW-18, EW-19, and EW-20 were installed near the current western extent of >MCL VOC contamination in the shallow zone, with the intention of containing VOCs above 10 times MCLs. Compliance wells ERP-9, ERP-10, and ERP-11 were installed downgradient of the extraction wells to assess compliance with the performance criteria for the western shallow zone. The location of the extraction wells and the compliance wells is subject to EPA's approval. Table 1 summarizes the sampling results from the ERAP monitoring, extraction, and compliance wells.

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Appendix D
Statement of Work-West Side

Appendix D to the Consent Decree

RD/RA STATEMENT OF WORK

**Western Shallow and Northwestern Deep
Portions of the Interim Remedial Action**

El Monte Operable Unit

SAN GABRIEL VALLEY SUPERFUND SITE AREA 1

LOS ANGELES COUNTY, CALIFORNIA

October 2003

258

TABLE OF CONTENTS

I.	<u>INTRODUCTION</u>	1
II.	<u>SUMMARY OF THE EL MONTE OU REMEDIAL ACTION</u>	2
III.	<u>PERFORMANCE CRITERIA</u>	3
IV.	<u>LIST OF DELIVERABLES AND OTHER TASKS</u>	8
	A. <u>COMPLIANCE AND SENTINEL WELL NETWORK PLAN</u>	9
	B. <u>COMPLIANCE AND SENTINEL WELL INSTALLATION REPORT</u>	9
	C. <u>REMEDIAL DESIGN / REMEDIAL ACTION WORK PLAN</u>	9
	D. <u>REMEDIAL DESIGN</u>	13
	E. <u>REMEDIAL ACTION</u>	17
	F. <u>OPERATION AND MAINTENANCE</u>	21
	G. <u>COMPLIANCE MONITORING PLAN</u>	22
	H. <u>MONITORING PLAN(S) FOR OTHER POTENTIAL REMEDIAL ACTIONS</u>	24
	I. <u>GENERAL MONITORING PLAN</u>	24
	J. <u>PERFORMANCE EVALUATION REPORTS</u>	26
	K. <u>PROGRESS REPORTS</u>	27
	L. <u>COMPLIANCE MONITORING REPORTS</u>	27
	M. <u>SUPPORTING PLANS</u>	28
	N. <u>WORK COMPLETE REPORT</u>	31
V.	<u>SCHEDULE FOR MAJOR DELIVERABLES AND OTHER TASKS</u>	32
	DESIGN-BUILD SCHEDULE	32
	DESIGN-BID-BUILD SCHEDULE	37
VI.	<u>REFERENCES</u>	42

FIGURES AND ATTACHMENTS

Approximate Post-RI/FS Well Locations	Figure 1
Water Quality Data, Early Response Action Program Monitoring	Table 1
June 1999 Interim Record of Decision	Attachment 1
Explanation of Significant Differences	Attachment 2
Summary of Pre-Remedial Design Work	Attachment 3

**STATEMENT OF WORK FOR
REMEDIAL DESIGN AND REMEDIAL ACTION
(West Side)
El Monte Operable Unit
San Gabriel Valley Superfund Site Area 1**

I. Introduction

This Statement of Work (SOW) describes the activities West Side Performing Settling Defendants must perform to design, construct, operate, maintain, monitor, and evaluate a portion of the interim remedial action described in the El Monte Operable Unit (EMOU) Interim Record of Decision (IROD), as supplemented by the Explanation of Significant Differences (ESD), and as set forth in this SOW. The IROD, which specifies the remedy for the site, was signed June 23, 1999. The ESD was issued in August 2002. This SOW is Appendix D to the EMOU Consent Decree.

The interim remedial action described in the IROD includes performance criteria that require control of contaminant migration in the shallow zone, the deep zone northwestern area, and the deep zone southern area. The West Side Performing Settling Defendants to this Consent Decree are required to implement the deep zone northwestern area remedial action and a portion of the shallow zone remedial action (the western portion). The western portion of the shallow zone generally refers to the contamination present west of Baldwin Avenue (Figure 1).

The EMOU addresses a several-square-mile area of groundwater contamination extending beneath portions of El Monte, Rosemead, and Temple City, in Los Angeles County, California. Chemicals of potential concern in the groundwater in the EMOU include volatile organic compounds (VOCs) listed in Table 5 of the IROD (Attachment 1) and emerging chemicals (ECs) perchlorate, n-Nitrosodimethylamine (NDMA), hexavalent chromium, and 1,4-dioxane listed in the ESD (Attachment 2).

EPA intends to review deliverables to assess whether or not the remedial action will achieve the remedial objectives defined in the IROD, as supplemented by the ESD, and Performance Criteria set forth in the IROD, ESD, and this SOW. EPA review or approval of a task or deliverable shall not, however, be construed as a guarantee of the adequacy of such task or deliverable.

A description of the pre-Remedial Design work that has been completed by the Potentially Responsible Parties (PRPs) can be found in Attachment 3 of the SOW.

The definitions set forth in Section IV of the Consent Decree shall apply to this SOW unless expressly provided otherwise herein.

260

II. Summary of the El Monte OU Interim Remedial Action Components to be Addressed by this SOW

Shallow Zone - Western Portion:

The IROD, as supplemented by the ESD, requires the remedial action to prevent shallow zone groundwater contamination that exceeds 10 times the ARARs (Table 5 of the IROD) from migrating beyond its current lateral and vertical extent in the western and eastern EMOU. Figure 2 of the IROD showed that, as of 1997, the higher concentration shallow zone contamination was distributed in two areas of the EMOU. A more recent (2002) depiction of the shallow VOC contamination in the EMOU is shown on Figure 1 of this SOW. Groundwater must be monitored for compliance to verify that Performance Criteria are met. Compliance with Performance Criteria will be evaluated using data collection and analysis procedures outlined in the Compliance Monitoring Plan, as well as information presented in compliance monitoring and performance evaluation reports. EPA shall approve the locations and specifications of the shallow zone compliance wells.

Deep Zone - Northwestern Area:

The IROD requires the remedial action to provide sufficient hydraulic control to prevent deep zone groundwater contamination that exceeds the ARARs listed in Table 5 of the IROD from migrating beyond the Encinitas Well Field Area in the northwestern portion of the EMOU. In the northwest portion of the OU, hydraulic control can be accomplished by: (1) installing new wells upgradient of the Encinitas Well Field Area; or (2) using existing production wells alone, or in combination with new wells.

Compliance wells shall be installed in strategic locations to verify that the hydraulic control is sufficient to meet the Performance Criteria. The approximate extent of the northwestern deep zone plume can be found in Figure 3 of the IROD. EPA shall approve the locations and specifications of the deep zone compliance wells. Sentinel wells located upgradient of the compliance wells are recommended to avoid exceedances of the Performance Criteria.

Compliance monitoring wells should be located such that if ARARs are exceeded or are expected to be exceeded in upgradient sentinel monitoring wells, adequate time is available to take action to maintain concentrations below ARARs at the compliance wells.

Initial Remedial Design Work:

As an initial step, West Side Performing Settling Defendants shall design and install the compliance wells (and sentinel wells, if necessary) in the shallow and deep groundwater zones. West Side Performing Settling Defendants shall demonstrate to EPA's satisfaction that each well is appropriate for measuring compliance, as described in Section III (Performance Criteria) of this SOW. Prior to installation of compliance and sentinel wells, West Side Performing Settling Defendants shall submit to EPA a Compliance and Sentinel Well Network Plan, describing the

proposed locations and specifications of the wells, as required in Section IV of this SOW. After installation and sufficient sampling of each proposed compliance and sentinel well, EPA shall determine whether the location and construction of each well is acceptable for its proposed use. West Side Performing Settling Defendants shall submit a Compliance and Sentinel Well Installation Report, signifying the time at which compliance monitoring will begin, as described in Section IV of this SOW. After EPA approval of the Compliance and Sentinel Well Installation Report, West Side Performing Settling Defendants shall assume quarterly sampling of each well to ensure that the Performance Criteria are met in the shallow and deep zones, and submit Quarterly Compliance Monitoring Reports, as required by the Compliance Monitoring Plan.

Other Remedial Design requirements are set forth in Sections III and IV of this SOW.

III. Performance Criteria

As specified in the Consent Decree, West Side Performing Settling Defendants shall meet all Performance Criteria, Remedial Action Objectives and Applicable or Relevant and Appropriate Requirements (ARARs) set forth in the IROD, ESD, and this SOW. The IROD states that the Remedial Action Objectives (RAOs) for the EMOU are to prevent exposure of the public to contaminated groundwater above MCLs; inhibit contaminant migration from the more highly contaminated portions of the aquifer to the less contaminated areas or depths; reduce the impact of continued contaminant migration on downgradient water supply wells; and protect future uses of less contaminated and uncontaminated areas. All compliance monitoring data shall be reported in the Quarterly Compliance Monitoring Reports. The IROD requires that the remedial action provide sufficient hydraulic control of contaminated groundwater in the shallow and deep zones to meet the Performance Criteria.

The Performance Criteria include the treatment standards, standards of control, quality criteria, and other substantive requirements, criteria or limitations included in the IROD and ESD.

A. Shallow Zone Compliance with Performance Criteria

The remedial action shall prevent groundwater in the shallow zone with VOC contamination above 10 times the ARARs (Table 5 of the IROD) from migrating beyond its current lateral and vertical extent.

West Side Performing Settling Defendants shall monitor compliance with this criterion at a sufficient number of wells that meet the following requirements and have been approved by EPA:

- (1) Wells located laterally and vertically downgradient of shallow groundwater contamination exceeding 10 times the relevant VOC ARARs, but generally within areas where VOC concentrations exceed the ARARs listed in Table 5 of the IROD.

- (2) Wells completed with screen lengths generally of 20 feet or less located between the water table and 130 feet bgs. Alternative screened intervals and well depths may be appropriate in limited situations and will be subject to EPA evaluation and approval on a case-by-case basis.

West Side Performing Settling Defendants shall conduct quarterly sampling at the shallow zone compliance wells to ensure compliance with the shallow zone Performance Criteria. Results shall be reported in the Quarterly Compliance Monitoring Reports. The frequency of sampling may be decreased in the future if the monitoring data support such a decrease, and West Side Performing Settling Defendants obtain EPA approval. Conversely, if it appears, based on trends in sampling data, that concentrations may exceed the Performance Criteria, the sampling frequency may be increased. Contaminant concentrations at the compliance wells will be the absolute criteria for evaluating compliance. The Compliance Monitoring Plan shall specify how compliance well data will be used to demonstrate compliance with the Performance Criteria. EPA expects that groundwater containment actions will be implemented sufficiently upgradient of the compliance wells to provide enough of a buffer zone to allow additional actions to be taken, if necessary, to ensure compliance. The use of sentinel well data will be permitted to guide containment actions which may affect or alter the measurements at the compliance wells.

To avoid exceedances of the shallow zone performance criteria, EPA recommends that West Side Performing Settling Defendants install additional sentinel wells or use existing wells upgradient of the compliance wells, where appropriate, as an early warning system to provide West Side Performing Settling Defendants sufficient time to address and prevent noncompliance.

B. Deep Zone Compliance with Performance Criteria:

The remedial action shall provide sufficient hydraulic control to prevent groundwater in the deep zone with VOC contamination above ARARs (Table 5 of the IROD) from: (a) migrating into or beyond the Encinitas Well Field Area in the northwest portion of the OU. The Encinitas Well Field Area is defined as the area encompassed by (1) the wells listed in Section 11.1.3.2 of the IROD and (2) the current downgradient extent of contamination above ARARs in the deep zone, in the vicinity of the wells listed in Section 11.1.3.2 of the IROD.

In the northwest portion of the OU, hydraulic control can be accomplished by: (1) installing new wells upgradient of the Encinitas Well Field Area; or (2) using existing production wells alone, or in combination with new wells. If existing production wells are used, West Side Performing Settling Defendants shall demonstrate that pumping from the production wells alone, or in combination

with new wells, provides sufficient hydraulic control to meet the Performance Criteria. If existing production wells are used, West Side Performing Settling Defendants shall also provide assurances acceptable to EPA that the wells will operate in a manner that ensures compliance with the Performance Criteria, if possible. The West Side Performing Settling Defendants shall provide copies of agreements between themselves and the water companies or entities who own the production wells to EPA for approval. The remedial measures must provide sufficient hydraulic control, without the aid of other wells not included in the remedial action, to ensure that the Performance Criteria are not exceeded.

West Side Performing Settling Defendants shall monitor compliance with this criterion at a sufficient number of compliance wells that meet the following requirements and have been approved by EPA:

- (1) Located within 2,000 feet of either (1) the current extent of groundwater contaminated with any VOC exceeding its ARAR or (2) a production well listed in Section 11.1.3.2 of the IROD, whichever represents the nearest margin of the Encinitas Well Field Area. The intent of locating these wells in this manner is to provide compliance points that are sufficiently distant from existing contamination above ARARs to provide enough time to ensure that additional actions can be taken before threshold concentrations are exceeded. The wells must also be sufficient in number, appropriately screened and adequately located to ensure that contamination above ARARs does not migrate away from the Encinitas Well Field Area.
- (2) Located generally west to northwest of the current extent of deep zone contamination, within the area with detectable VOC concentrations in the deep zone.
- (3) Completed with screen lengths of 20 feet or less within the deep zone. Larger, or multiple depth, screened intervals may be appropriate in limited situations subject to EPA evaluation and approval on a case-by-case basis.

West Side Performing Settling Defendants shall conduct quarterly sampling at the deep zone compliance wells to ensure compliance with the deep zone Performance Criteria. Results shall be reported in the Quarterly Compliance Monitoring Reports. The frequency of sampling may be decreased in the future if the monitoring data supports such a decrease and West Side Performing Settling Defendants obtain EPA approval. Conversely, if it appears, based on trends in sampling data, that concentrations may exceed the Performance Criteria, the sampling frequency may be increased. Contaminant concentrations at the compliance wells will be the absolute criterion for evaluating compliance. The Compliance Monitoring Plan shall specify how compliance well data will be used to demonstrate compliance with the Performance Criteria. EPA expects that

264

groundwater containment actions will be implemented sufficiently upgradient of the compliance wells to provide enough of a buffer zone to allow additional actions to be taken, if necessary, to ensure compliance.

C. Additional Requirements

Implementation of the remedial action shall not adversely affect production wells that are not part of the remedial action (i.e., shall not increase the migration of contamination into the wells). In addition, the remedial action must meet the Performance Criteria for both the shallow and deep zones without relying on the effects of wells that are not part of the remedial action.

Indications of an imminent exceedance of the Performance Criteria at a compliance well will be considered as evidence that groundwater contamination is migrating and that additional hydraulic containment or alternative, appropriate measures, as approved by EPA, shall be required. In the event of an actual or imminent exceedance of the Performance Criteria at the compliance wells, West Side Performing Settling Defendants shall take actions (e.g., implement additional groundwater extraction and treatment) to achieve sufficient hydraulic control within a time frame specified in the Compliance Monitoring Plan (Section IV.G). A verified exceedance of the Performance Criteria at a compliance well is a violation of the Consent Decree which may result in enforcement action.

D. Groundwater Treatment and Discharge

West Side Performing Settling Defendants shall treat all groundwater that is extracted pursuant to this SOW. West Side Performing Settling Defendants shall install and operate treatment systems that are designed to reduce the concentrations of the contaminants listed in Table 5 of the IROD to below ARARs. Subject to EPA approval, these requirements may not apply to EPA-approved CERCLA Section 104(b) activities that will result in temporary high flow, high volume discharges (e.g., discharges from sampling of selected water supply wells or aquifer tests).

Extracted groundwater is expected to be treated with air stripping (with off-gas controls) or liquid-phase carbon adsorption to remove the contaminants listed in Table 5 of the IROD. Extracted groundwater may need to be treated for the contaminants listed in the ESD by ion exchange and ultraviolet light with oxidation, or other appropriate technologies, as necessary, to achieve compliance with the ARARs. If alternative treatment technologies are proposed, EPA will evaluate the alternative technologies in accordance with the criteria specified in 40 CFR Section 300.430 during remedial design.

265

Following treatment, extracted groundwater can either be provided to local water purveyors for use in the San Gabriel Basin ("the Basin"), or discharged to Eaton Wash or the Rio Hondo. Alternative discharge options may be used, subject to EPA approval. Unless waived by the appropriate agencies and approved by EPA, disposal of the treated groundwater must comply with the applicable or relevant and appropriate requirements (ARARs) identified in the IROD and other requirements for the contaminants listed in the ESD that need to be considered. In addition, introduction of treated groundwater into a public water supply is an offsite activity that must comply with all other state and federal requirements in effect at the time of the activity.

The extraction and treatment of groundwater shall comply with the following requirements:

1. Treatment systems shall be designed and operated to reduce the concentrations of contaminants to below the ARARs listed in Table 5 of the IROD under all anticipated operating conditions; treatment systems for the contaminants listed in the ESD shall be designed and operated, as necessary, to achieve compliance with ARARs.
2. Best available control technology for toxics (T-BACT) shall be used on new stationary operating equipment, so the cumulative carcinogenic impact from air toxics does not exceed the maximum individual cancer risk limit of ten in one million (1×10^{-5}), as required by South Coast Air Quality Management District (SCAQMD) Rule 1401;
3. For water to be provided to a public water supply, the installation and operation of treatment systems shall be designed to reduce the concentrations of parameters for which there are Federal or State *Secondary* MCLs to attain secondary MCLs;
4. Extraction and treatment systems shall comply with the substantive portions of SCAQMD Regulation XIII, comprising Rules 1301 through 1313, pertaining to new source review;
5. Extraction and treatment systems shall comply with the water quality objectives for discharge of treated water from the Regional Water Quality Control Board (RWQCB) Los Angeles Basin Plan and State Water Resources Control Board (SWRCB) Resolution 68-16, as outlined in the IROD;
6. Extraction and treatment systems shall comply with limits in visible emissions (SCAQMD Rule 401) and particulate concentrations (SCAQMD Rule 403);

7. Extraction and treatment systems shall not cause the discharge of material that is odorous or causes injury, nuisance or annoyance to the public (SCAQMD Rule 402);
8. Extraction and treatment systems shall comply with the substantive requirements in Title 22, California Code of Regulations (CCR), Sections 66264.601 -.603 for *Miscellaneous units*, and related substantive closure requirements in Sections 66264.111 - .115 for air strippers or granular activated carbon (GAC) contractors;
9. Extraction and treatment systems shall comply with container and storage requirements in Title 22, CCR, Sections 66264.170 - .178 for the storage of contaminated groundwater over 90 days;
10. Extraction and treatment systems shall comply with Title 22, CCR, Sections 66262 and 66268 and other State Hazardous Waste Control Act (HWCA) requirements for storage and disposal if the spent carbon is classified as a hazardous waste; and
11. Extraction and treatment systems shall comply with the substantive portions of the State Water Well Standards for construction of water supply wells.

IV. List of Deliverables and Other Tasks

West Side Performing Settling Defendants shall submit plans, specifications, and other deliverables for EPA review and/or approval, as specified below. EPA may also request periodic updates of selected deliverables (e.g., Work Plan, Sampling Plan, Monitoring Plans, etc.) described in this section of the SOW, as more information is gathered or as conditions change during implementation of the RD/RA. One copy of each final written deliverable shall be provided in an unbound format suitable for reproduction; additional copies shall be provided as stated in the Consent Decree. Information presented in color must be legible and interpretable when reproduced in non-color. If EPA requests, final written deliverables shall also be provided in electronic format. Subject to approval in advance by EPA, large format submittals may also be submitted electronically in a CD deliverable format.

West Side Performing Settling Defendants shall implement quality control procedures to ensure the quality of all reports and submittals to EPA. These procedures shall include but are not limited to: internal technical and editorial review; independent verification of calculations; and documentation of all reviews, problems identified, and corrective actions taken.

As described in Section XI of the Consent Decree, EPA may approve, disapprove, or modify each deliverable. Major deliverables are described below and shall be submitted according to the schedule in Section V of this SOW.

A. Compliance and Sentinel Well Network Plan

Prior to installation of compliance and sentinel wells, West Side Performing Settling Defendants shall submit to EPA a Compliance and Sentinel Well Network Plan, describing the proposed locations and specifications of the compliance or sentinel wells. All existing wells that may be used for compliance or sentinel purposes must be described in this plan. Additionally, all proposed new compliance and sentinel wells must be described and a schedule for their installation provided. West Side Performing Settling Defendants shall demonstrate to EPA's satisfaction that each proposed compliance well is appropriate for measuring compliance, as described in Section III (Performance Criteria) of this SOW. This plan will include sampling procedures for confirming the adequacy of all proposed compliance and sentinel wells. West Side Performing Settling Defendants must sample each proposed compliance and sentinel well at least two times to demonstrate that each well is suitable to be a compliance well as described in the IROD and this SOW. Additional confirmation sampling may be required for proposed compliance wells if initial sampling results are inconsistent. After installation and sufficient sampling, EPA shall determine whether each well is acceptable for use as a compliance and or sentinel well.

B. Compliance and Sentinel Well Installation Report

After installation of the compliance and sentinel wells, West Side Performing Settling Defendants shall submit a Compliance and Sentinel Well Installation Report, signifying the time at which compliance monitoring will begin. This report will include all sampling results for all proposed compliance and sentinel wells, and the data must show concentrations that adhere to the requirements for compliance and sentinel wells as outlined in the IROD and this SOW. After EPA approval of the Compliance and Sentinel Well Installation Report, West Side Performing Settling Defendants shall assume quarterly sampling of each well to ensure that the Performance Criteria are met in the shallow and deep zones, and submit Compliance Monitoring Reports, as required by the Compliance Monitoring Plan, described in Section IV.G of this SOW.

C. Remedial Design/Remedial Action Work Plan

West Side Performing Settling Defendants shall submit a Work Plan that describes the management strategy for design and construction of the remedial action ("RD/RA Work Plan"). The RD/RA Work Plan must be reviewed and

268

approved by EPA in accordance with Section XI of the Consent Decree. The Work Plan shall include:

1. Project Description

The RD/RA Work Plan shall include a description of the work to be implemented by West Side Performing Settling Defendants. The initial work should first and foremost focus on the location, installation, and monitoring of compliance and sentinel wells, including preparation of the Compliance and Sentinel Well Network Plan as required in Section IV of this SOW. The Work Plan shall also include, where applicable, additional data collection efforts (see Section IV.C.7 of this SOW); extraction locations; treatment technologies; details on planned discharge of the treated water; locations of major project components; an approach for evaluating existing equipment and facilities to be used as part of the remedial action; and other key aspects of the project. The Work Plan shall briefly discuss the condition, anticipated longevity, and any limitations in the use of each existing facility.

2. Description of the Responsibility and Authority of All Organizations and Key Personnel Involved With the Remedial Action.

The RD/RA Work Plan shall include a description of the responsibilities and qualifications of key personnel expected to direct or play a significant role in the Remedial Design, Remedial Action, or Operation and Maintenance, including West Side Performing Settling Defendants' Project Coordinator, Designer, Construction Contractor, Construction Quality Assurance personnel, and Resident Engineer. The Work Plan shall define lines of authority and provide brief descriptions of duties.

3. Schedule

The RD/RA Work Plan shall identify the initiation and completion dates for each required design activity, construction activity, inspection, and deliverable required by the Consent Decree and this SOW, consistent with the schedule included as Section V of this SOW.

The Work Plan shall also identify the approximate timing of meetings and other activities that may require EPA participation, but are not identified in Section V of this SOW.

The schedule shall indicate that coordination meetings will initially occur on a monthly basis and may be decreased in frequency as deemed appropriate by EPA. The coordination meetings shall address project

status, problems, project risk management, solutions, contingency planning, and schedule. A representative of the West Side Performing Settling Defendants shall prepare a meeting summary to document all decisions made, issues outstanding, schedule changes, planned follow up, and assignments.

4. Contracting Strategy and Construction Process

The RD/RA Work Plan shall briefly describe the planned contracting strategy, including a brief description of the process for evaluation and approval of construction changes and EPA review and approval of significant changes. If the West Side Performing Settling Defendants propose a design/build approach, whereby the entire comprehensive all-in-one-package design and construction process is broken down into a series of discrete design-build packages, then, subject to EPA approval, the RD/RA Work Plan shall describe the contracting strategy consistent with this alternative project delivery approach.

5. Plans for Satisfying All Permitting Requirements and Acquiring Property, Leases, Easements, or Other Access.

The RD/RA Work Plan shall list all permits, property, leases, and easements required for implementation of the remedial action; permits, property, leases, and easements acquired to date; and a schedule for submittal of permit applications and acquisition of property, leases, or easements not yet obtained.

Where normally required, permits must be obtained for all off-site activities, such as from the California Department of Health Services for domestic use of treated water. West Side Performing Settling Defendants are not required to obtain permits for on-site remedial activities, but must comply with all substantive requirements, including local building codes. If permits will not be obtained for an onsite activity where a permit is normally required, West Side Performing Settling Defendants shall describe all consultative or coordination activities planned to identify and satisfy the substantive requirements. The status of permitting issues will be updated monthly in the monthly progress report to EPA.

6. Third Parties Necessary for Design, Construction, or Operation of the Remedial Action.

The RD/RA Work Plan shall describe the roles and responsibilities of West Side Performing Settling Defendants, participating water producers and water agencies, and other parties expected to play a significant role in the design, construction, or operation of the remedial action. The Work Plan shall summarize and provide copies of Memorandums of Understanding and draft or final agreements with water producers and other third parties expected to participate in implementation of the remedial action. If legally-binding agreements are not in place, the Work Plan shall describe commitments made to date and planned efforts to secure necessary commitments, including an estimated schedule. If the participation of a third party is uncertain, the Work Plan shall describe alternatives to be implemented in the event that the party does not fulfill its planned role. Possible third party roles include agreeing to the use of existing equipment (e.g., groundwater extraction wells, water treatment facilities, pipelines, groundwater recharge facilities), treatment plant operation, and acceptance of treated groundwater.

7. Identification of Any Concerns about the Quantity, Quality, Completeness, or Usability of Water Quality or Other Data Upon Which the Design Will Be Based

West Side Performing Settling Defendants shall provide a description of additional data collection efforts, if any, required for completion of the Remedial Design. This work, if any, will be initially described in the RD/RA Work Plan as one of the West Side Performing Settling Defendants' first deliverables. West Side Performing Settling Defendants shall consider whether any data are needed to verify that critical design assumptions remain valid (e.g., the areas of groundwater contamination requiring hydraulic containment). If additional data are required, West Side Performing Settling Defendants shall propose a schedule for preparation of a Sampling and Analysis Plan (or Addendum) and implementation of the Plan. The Plan shall include all appropriate efforts to evaluate additional data collected.

8. A Description of Planned Community Relations Activities to Be Conducted During Remedial Design and/or Remedial Action.

In accordance with Section XXX of the Consent Decree, West Side Performing Settling Defendants shall cooperate with EPA and the State in providing information regarding the Work to the public. As requested by EPA or the State, West Side Performing Settling Defendants shall

participate in the preparation of such information for dissemination to the public and in public meetings which may be held or sponsored by EPA or the State to explain activities at or relating to the Site.

9. Updates to the RD/RA Work Plan and Periodic Reporting to EPA

The RD/RA Work Plan shall describe provisions for reporting progress to EPA (consistent with the schedule included in Section V of this SOW and the Compliance Monitoring Plan to be prepared in accordance with Section IV.G of this SOW). The RD/RA Work Plan shall also describe how the Work Plan will be updated as needed to document changes or provide information not available at the time the Work Plan is submitted.

If any of the information requested is not known at the time the RD/RA work plan must be submitted, and omitting the information from the work plan will not prevent compliance with any other requirements of this SOW, West Side Performing Settling Defendants may submit the information at a later date. If any information is omitted, West Side Performing Settling Defendants shall note in the work plan that the missing information was not available and specify when it will be submitted.

D. Remedial Design

Remedial Design activities shall include the preparation of clear and comprehensive design documents, construction plans and specifications, and other design activities needed to implement the work and satisfy Performance Criteria set forth in the IROD, ESD, and this SOW. If EPA approves use of a design/build approach, the design and construction deliverables and milestones discussed below will need to be modified, subject to EPA approval. All plans and specifications shall be developed in accordance with relevant portions of the U.S. EPA's Superfund Remedial Design/Remedial Action Handbook (EPA 540/R-95/059), and in accordance with the schedule set forth in Section V of this SOW.

1. Conceptual and Preliminary Design

West Side Performing Settling Defendants shall submit a combined Conceptual and Preliminary Design Report in accordance with the approved schedule, as codified in the Work Plan. EPA approval is required before proceeding with further design work, unless EPA agrees otherwise. Unless modified by EPA, the Conceptual and Preliminary Design submittal shall include or address, at a minimum, the following:

- a. A detailed Design Basis Report that presents and justifies the concepts, assumptions, standards, and preliminary interpretations

and calculations used in the design. The Design Basis Report shall include:

- (1) Volume or flow rate of water, air, and other media requiring treatment or disposal;
- (2) A summary of water quality or other data to be used during design but not previously provided to EPA, along with an analysis of whether the data confirm assumptions, recommendations, or conclusions made to date for the EMOU;
- (3) Assumed treatment plant influent quality over the design life of the treatment system(s), with a description of the methodology used to develop the estimate (including discussion of the likelihood and magnitude of short-term and long-term changes in influent concentrations);
- (4) An explanation of how Performance Criteria for each aquifer zone will be met;
- (5) Discussion of any proposed or anticipated State or Federal drinking water or ambient water quality standards that would impact the design; and whether any special circumstances may apply.
- (6) Filtration, disinfection, corrosion control, or other treatment requirements in addition to removal of site contaminants;
- (7) Assumed treatment technologies and/or treatment trains (for all media and byproducts) and initial treatment process flow diagrams; appropriate equipment vendor information;
- (8) Preliminary sizing of treatment system(s) and other remedial action components;
- (9) Expected treatment facility removal capacity for all groundwater constituents requiring removal;
- (10) Delivery locations, rates, and pressures for the treated groundwater, and other conveyance system assumptions for supplying or discharging treated groundwater;

- (11) An assessment of the risk that insufficient recharge capacity may allow groundwater to leave the San Gabriel Basin and payment of make up water may be required. Provisions for alternative use of treated groundwater should be discussed;
 - (12) Interconnection requirements for delivery of treated groundwater, if any (e.g., connection to existing water distribution systems);
 - (13) System control strategy, including the level of reliability, redundancy, or specific damage prevention features needed in each major component of the remedial action to respond to seismic events, power outages, equipment failure, system maintenance, operator error, or deviations from design assumptions;
 - (14) Listing and discussion of the relative importance of siting criteria for new extraction wells, treatment facilities, pipelines, and other facilities, along with preliminary locations and alignments; and
 - (15) Estimate of the distance from each proposed extraction location to the location assumed in computer model simulations completed in support of the EMOU containment remedial actions and an evaluation of whether additional computer modeling activities are needed to verify the effectiveness of the actual extraction locations.
- b. An Updated Construction Schedule for construction and implementation of the Remedial Action that identifies timing for initiation and completion of all critical path tasks; and
 - c. An updated list of permits, regulatory agency approvals, MOUs, access or use agreements, easements, and properties developed or acquired to date; copies of permits, approvals, and agreements not previously supplied to EPA; and activities and schedules for obtaining outstanding items required before start of construction (e.g., for use of existing facilities or disposition of the treated water).
 - d. Preliminary plans, specifications, and drawings, of groundwater extraction, treatment, conveyance, and monitoring systems;

e. Listing of planned specification sections

2. Intermediate Design

Unless directed otherwise by EPA, West Side Performing Settling Defendants shall not be required to provide an Intermediate Design submittal, but may seek EPA review of design concepts or documents if desired.

3. Prefinal/Final Design

West Side Performing Settling Defendants shall submit the Prefinal Design when the design effort is complete in accordance with the approved schedule. The Prefinal Design shall fully address all comments made on the Conceptual and Preliminary Design Report (and during the Intermediate Design review, if it occurs) and, if not previously addressed, be accompanied by a memorandum indicating how the comments were incorporated into the Prefinal Design. The Prefinal Design documents shall be certified by a Professional Engineer currently registered in the State of California.

The Prefinal Design shall serve as the Final Design if EPA has no further comments and provides its approval. The Prefinal Design submittals shall include a capital and operation and maintenance cost estimate; reproducible drawings and specifications; and a complete set of construction drawings in full and one-half size reduction. The Final Design should also include a schedule for construction completion, and satisfaction of the "Operational and Functional" criteria.

West Side Performing Settling Defendants shall not be required to provide a Final Design submittal if, subject to EPA approval, the RD/RA is implemented using a design/build approach. Instead, West Side Performing Settling Defendants shall (a) provide as-built construction drawings to EPA, (b) meet with EPA for monthly, or less frequent, subject to EPA approval, updates, after completion of the Conceptual and Preliminary Design, (c) provide copies of bid packages for subcontracted components of remedy construction to EPA for review, and (d) provide a milestone schedule for design/build activities in the RD/RA Work Plan. If requested by EPA, the West Side Performing Settling Defendants shall prepare Technical Memoranda documenting key decisions made during the design/build phase.

4. Applicability of RD Requirements to Extraction at the Encinitas Well Field or other Production Wells

Groundwater at the Encinitas Well Field has been impacted by contaminated groundwater from the EMOU. The Southern California Water Company (SCWC) currently treats and blends groundwater extracted from the Encinitas Well Field for VOCs, and has one treatment system in operation. If West Side Performing Settling Defendants intend to use any existing facilities and/or production wells in the Encinitas Well Field Area, or other purveyor-owned facilities and/or production wells as part of the northwestern deep zone remedial action, an agreement must be reached with the necessary water purveyors that provides for long-term extraction at the existing production wells at rates and depths sufficient to ensure compliance with the Performance Criteria in Section III of this SOW. West Side Performing Settling Defendants shall submit as-built drawings and specifications for all existing facilities and wells to be used, operating agreements, and an operation and maintenance manual in lieu of design submittals. If any new facilities or wells will be required in the northwestern deep zone to adequately contain the contaminated groundwater plume and meet the Performance Criteria, these should be included in the design process described above in Items 1 through 4. EPA will review the documents to evaluate the project's capability to reliably achieve the Performance Criteria described in Section III of this SOW. After completing its evaluation, EPA will indicate: i) the extent to which the project appears to be achieving Performance Criteria; and ii) any needed modifications to the project or its operation to fully satisfy Performance Criteria or ensure the project's future capability to meet Performance Criteria.

E. Remedial Action

West Side Performing Settling Defendants shall implement the Remedial Action. During the design period, in preparation for implementation of the Remedial Action and in accordance with the schedule included in Section V of this SOW, West Side Performing Settling Defendants shall submit a Construction Quality Assurance Plan, a Construction Health and Safety Plan, and any needed updates to the RD/RA Work Plan. The Construction Quality Assurance Plan must be reviewed and approved by EPA prior to the initiation of the Remedial Action.

Upon approval of the Final Design and Construction Quality Assurance Plan, West Side Performing Settling Defendants shall begin construction in accordance with the approved schedule. Significant field changes to the Remedial Action as set forth in the RD/RA Work Plan and Final Design shall not be undertaken without the approval of EPA. All work on the Remedial Action shall be

documented in enough detail to produce as-built construction drawings after the Remedial Action is complete. Review and/or approval of submittals does not guarantee that the remedial action, when constructed, will meet the Performance Criteria.

1. Remedial Action Work Plan

West Side Performing Settling Defendants shall not be required to submit a separate Remedial Action Work Plan. Instead, West Side Performing Settling Defendants shall provide supplemental information as necessary to update the Remedial Design/ Remedial Action Work Plan.

2. Preconstruction Meeting

A Preconstruction Meeting shall be held after selection of the construction contractor but before initiation of construction. The meeting shall include West Side Performing Settling Defendants' representatives and interested federal, state and local government agency personnel; shall define the roles, relationships, and responsibilities of all parties; review work area security and safety protocols; review any access issues; review construction schedule; and review construction quality assurance procedures.

West Side Performing Settling Defendants shall ensure that the results of the Preconstruction Meetings are documented and transmitted to all parties in attendance, including the names of people in attendance, issues discussed, clarifications made, and instructions issued.

3. Remedial Action Construction

West Side Performing Settling Defendants shall implement the Remedial Action as detailed in the approved RD/RA Work Plan (as updated) and approved Final Design.

4. Prefinal Construction Inspection

Within fourteen (14) days after West Side Performing Settling Defendants believe that construction is complete and the remedial action, or a discrete portion of the remedial action, is operational and functional, West Side Performing Settling Defendants shall notify EPA and the State for the purposes of conducting a prefinal inspection to be attended by EPA and West Side Performing Settling Defendants. Other participants shall include the Project Coordinator and other federal, state, and local agencies with a jurisdictional interest. If a Prefinal Construction

Inspection is held for a portion of the remedial action, one or more additional inspections shall be conducted so that the entire remedial action is inspected.

The objective of the inspection(s) is to determine whether construction is complete and the remedial action (or the inspected portion) is operating as designed. Any outstanding construction items discovered during the inspection shall be identified and corrected and noted on a bullet list. West Side Performing Settling Defendants shall certify that the equipment is effectively meeting the purpose and intent of the specifications. Retesting shall be completed where deficiencies are revealed. A Prefinal Construction Inspection Report shall be submitted by West Side Performing Settling Defendants that outlines the outstanding construction items, actions required to resolve the items, completion date for the items, and an anticipated date for a Final Inspection. The Prefinal Construction Inspection Report can be in the form of a bullet list or letter or Technical Memorandum.

5. Final Construction Inspection

Within fourteen (14) days after completion of any work identified in the prefinal inspection report, West Side Performing Settling Defendants shall notify EPA and the State for the purposes of conducting a final inspection. The final inspection shall consist of a walk-through inspection by EPA and West Side Performing Settling Defendants. The prefinal inspection report shall be used as a checklist with the final inspection focusing on the outstanding construction items identified in the prefinal inspection. Confirmation shall be made that outstanding items have been resolved.

Any outstanding construction items discovered during the inspection still requiring correction shall be identified, photographed if possible, and noted on a punch list. If any items are still unresolved, the inspection shall be considered to be a Prefinal Construction Inspection requiring another Prefinal Construction Inspection Report and subsequent Final Construction Inspection.

6. Remedial Action Construction Report

As specified in the approved schedule included in Section V of this SOW, after construction is completed on the entire remedial action and the systems are operating as designed, West Side Performing Settling Defendants shall submit a Remedial Action Construction Report. In the report, a registered Professional Engineer and West Side Performing

Settling Defendants' Project Coordinator shall state that the construction of the Remedial Action has been completed in accordance with the RD/RA Work Plan submitted under this SOW. The written report shall provide a synopsis of the work defined in this SOW, describe deviations from the RD/RA Work Plan, include as-built drawings signed and stamped by a licensed Professional Engineer, provide actual costs of the Remedial Action (and O&M to date), and provide a summary of the results of operational and performance monitoring completed to date. The report shall contain the following statement, signed by a responsible corporate official of the West Side Performing Settling Defendants or the West Side Performing Settling Defendants' Project Coordinator:

"To the best of our knowledge, after thorough investigation, we certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

7. Interim Remedial Action Report

As specified in the approved schedule included in Section V of this SOW, after West Side Performing Settling Defendants have determined that the performance criteria of the remedial action are being met, West Side Performing Settling Defendants shall submit an Interim Remedial Action Report pursuant to EPA 540-R-98-016, OSWER Directive 9320.2-09A-P "Close Out Procedures for National Priorities List Sites", January 2000. In the report, a registered Professional Engineer and West Side Performing Settling Defendants' Project Coordinator shall certify that the Interim Remedial Action is "operational and functional" as intended and that performance criteria listed in Section III of this SOW are being met. The written report shall provide a summary of the results of operational and performance monitoring completed to date and shall provide documentation to substantiate the West Side Performing Settling Defendants' certification in full satisfaction with the Consent Decree, including, but not limited to, relevant data presented in accordance with Sections IV.J (Performance Evaluation Reports) and IV.L (Compliance Monitoring Reports) of this SOW. The report shall also summarize deviations from the RD/RA Work Plan and shall contain the following statement, signed by a responsible corporate official of the West Side Performing Settling Defendants or the West Side Performing Settling Defendants' Project Coordinator:

"To the best of our knowledge, after thorough investigation, we certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

F. Operation and Maintenance

Operation and Maintenance (O&M) shall be performed in accordance with the approved Operation and Maintenance Manual.

1. Operation and Maintenance Plan

West Side Performing Settling Defendants shall not be required to submit an Operation and Maintenance (O&M) Plan. O&M-related information shall be provided in the O&M Manual (see Section IV.F.2 of this SOW) and/or the Compliance Monitoring Plan (see Section IV.G of this SOW).

2. Operation and Maintenance Manual

West Side Performing Settling Defendants shall submit a draft Operation and Maintenance Manual during the design period in accordance with the approved schedule, and a revised draft after the final construction inspection to incorporate manufacturer/vendor information and any design modifications implemented during the Remedial Action. The Operation and Maintenance Manual must be reviewed and approved by EPA. The manual shall include all necessary Operation and Maintenance information for the operating personnel, and provide or address the following:

- a. System description;
- b. Startup and shutdown procedures;
- c. Criteria for determining when the remedial action is "operational and functional"
- d. Description and schedule of normal operation and maintenance tasks, including equipment and material requirements, anticipated equipment replacement for significant components, availability of spare parts, provisions for remote monitoring and control, operator training and certification requirements, staffing needs, and related requirements;

- e. Indicators of system performance and/or maintenance (e.g., parameters to be monitored to determine timing for activated carbon or ion exchange resin replacement or to assess biological reactor performance);
 - f. Criteria to be used to determine whether the treated groundwater will be supplied to one or the other of the available alternative discharge options approved by EPA;
 - g. Any planned variation in groundwater extraction rate, including whether each extraction well is to be operated at constant or variable flow rate, and a description of the magnitude and timing of any expected variation;
 - h. Record keeping and reporting requirements, including operating and inspection logs, maintenance records, and periodic reports; and
 - i. Description and analysis of potential operating problems (e.g., equipment failure, higher than expected contaminant concentrations), including emergency operating and response activities and relevant health and safety information.
3. Applicability of O&M Requirements to Extraction at the SCWC Wells or Other Production Wells in the northwestern deep zone of the EMOU

See Section IV.D.4 of this SOW.

G. Compliance Monitoring Plan

Compliance monitoring activities shall be performed in accordance with the approved Compliance Monitoring Plan, to evaluate whether the Performance Criteria, as described in Section III of this SOW, in the ESD, and in the IROD, are met. The Compliance Monitoring Plan shall specify the locations of compliance wells and any sentinel wells, sampling methods, and, at a minimum, a quarterly sampling frequency. West Side Performing Settling Defendants shall submit the Compliance Monitoring Plan no later than the specified date in the approved schedule. Compliance with the Performance Criteria will be confirmed by results from sampling at EPA-approved compliance wells on a quarterly basis, and shall be documented in Compliance Monitoring Reports. EPA shall be notified of noncompliance with any Performance Criteria within 5 days of receipt of data verifying noncompliance. In addition West Side Performing Settling Defendants shall collect appropriate confirmation samples within 10 days of receipt of data indicating potential noncompliance (for example, after the first

281

exceedance of Performance Criteria at a compliance well). The Compliance Monitoring Plan shall address the following requirements:

1. Data Collection Parameters

West Side Performing Settling Defendants shall specify the locations of compliance and sentinel wells in the shallow and deep groundwater zones. Such wells shall comply with and be adequate to meet the Performance Criteria. The Compliance Monitoring Plan shall contain sufficient information for EPA to assess whether the compliance and sentinel wells meet Performance Criteria. West Side Performing Settling Defendants shall specify sampling methods, data analysis procedures, and, at a minimum, a quarterly sampling frequency.

2. Computer Modeling

West Side Performing Settling Defendants may be required by EPA to perform computer model simulations of groundwater flow and contaminant migration as part of compliance monitoring or to evaluate modifications to the extraction plan, if needed. The Compliance Monitoring Plan shall describe proposed changes to the calibration of an existing model, or propose a schedule for providing such information. All models must be calibrated by West Side Performing Settling Defendants and approved by EPA prior to use. If modeling work is performed, wells that are not considered part of the remedial action, but which do cause hydraulic influence, will be accounted for in the modeling simulations.

Subject to approval by EPA, West Side Performing Settling Defendants may propose alternative methods of evaluating whether the remedy is achieving the compliance performance objectives, and, if needed, the nature and scope of modifications to the extraction plan.

3. Split Sampling

The Compliance Monitoring Plan shall specify procedures for coordination of EPA or State collection of split or replicate samples.

4. Contingency Action

The Compliance Monitoring Plan shall propose contingency plans to be used in the event that additional compliance monitoring activities are required to evaluate compliance with Performance Criteria. Contingency actions could include increases in monitoring frequency and installation

282

of additional groundwater monitoring wells, as approved by EPA. If compliance monitoring data indicate noncompliance, West Side Performing Settling Defendants shall submit a Compliance Action Plan to EPA within 14 days of receipt of data verifying noncompliance. Actions may include, but not necessarily be limited to, additional compliance monitoring to confirm the finding, operational modifications followed by additional compliance monitoring, or design and construction efforts for additional extraction activities.

5. Data Reporting

The Compliance Monitoring Plan shall propose electronic reporting formats to support submittal of all groundwater data to EPA.

H. Monitoring Plan(s) for Other Potential Remedial Actions

If West Side Performing Settling Defendants propose to use passive remedial actions at certain locations, and these actions are shown to be capable of compliance with applicable Performance Criteria, then West Side Performing Settling Defendants must monitor these locations in accordance with an EPA-approved monitoring plan.

I. General Monitoring Plan

Monitoring activities for wells other than the compliance and sentinel wells shall be performed in accordance with the approved General Monitoring Plan. The plan shall specify type, locations, frequencies, methods, and duration of monitoring activities. West Side Performing Settling Defendants shall submit the General Monitoring Plan no later than the date specified in the approved schedule. The General Monitoring Plan shall address the following requirements:

1. Data Collection Parameters

A description of the types of data to be collected, sampling and data gathering methods, monitoring locations, sampling frequencies, and if appropriate, minimum monitoring duration.

2. Well Discharge

West Side Performing Settling Defendants shall measure flow rates at each extraction well (and calculate volumes of water extracted) as a function of time, using a meter/totalizer installed on the discharge pipe for each extraction well. The reading on the meter/totalizer shall be

recorded at least quarterly and whenever water quality samples are collected from that well.

3. Treatment Plant Effluent/Treated Groundwater

West Side Performing Settling Defendants shall analyze treated water samples to verify attainment of groundwater treatment goals (i.e., at a minimum, MCLs, as stated in the discharge limits) and monitor operational parameters that are used as indicators of treatment facility performance or the need for maintenance. West Side Performing Settling Defendants shall propose appropriate parameters and schedules for sampling of treated groundwater to ensure compliance with ARARs. After a period of initial monitoring, West Side Performing Settling Defendants may propose criteria for subsequent reductions in sampling and/or analysis frequencies if the sampling results support such reductions.

4. Contaminant Mass Removal

Though mass removal is not one of EPA's remedy performance criteria described in Section III of this SOW, West Side Performing Settling Defendants shall track the cumulative mass of contaminants removed from the aquifer. The contaminants to be monitored for contaminant mass removal calculations, the rationale for their selection, and the frequency of these calculations, will be described in the General Monitoring Plan, subject to EPA approval.

5. Aquifer Testing

West Side Performing Settling Defendants shall perform aquifer tests at new extraction wells to estimate aquifer transmissivity in the vicinity of the wells.

6. Air Emissions Monitoring

If applicable, West Side Performing Settling Defendants shall perform air emission monitoring to verify that air emissions from treatment operations do not exceed ARARs.

7. Data Analysis and Reporting

The General Monitoring Plan shall also describe how the performance data will be analyzed, interpreted, and reported to evaluate compliance with ARARs. All data shall be submitted by the deadlines specified in an

agreed upon schedule. Claims of change, difference, or trend in water quality or other parameters (e.g., between observed values and an ARAR) shall include the use of appropriate statistical concepts and tests.

All analytical data, whether or not validated, shall be submitted to EPA within 60 calendar days of sample shipment to the laboratory or 14 days of receipt of analytical results from the laboratory, whichever occurs first. All analytical data, previously validated and in electronic format in an approved data structure, shall be submitted within 90 calendar days of the sample shipment to the laboratory. Well construction information shall be submitted at the completion of the initial sampling activities or within 90 days after completion of a well, whichever is earlier.

8. Split Sampling

The General Monitoring Plan shall also specify procedures for coordination of EPA or State collection of split or replicate samples.

9. Reporting Requirements to Support the Compliance Monitoring Plan and General Monitoring Plan

The General Monitoring Plan shall provide a brief description of the contents and format for the Quarterly Compliance Monitoring Reports and Performance Evaluation Reports (see below).

EPA may also request periodic updates of selected deliverables (e.g., Work Plan, Sampling Plan, Monitoring Plans, etc.) described in this section of the SOW, as more information is gathered or as conditions change during implementation of the RD/RA.

J. Performance Evaluation Reports

Performance Evaluation Reports shall include: summaries of compliance monitoring activities conducted since the previous reporting period (including summaries of Compliance Monitoring Reports); updated water level contour maps showing measured water levels, including capture zones for extraction wells; field data to demonstrate hydraulic control; measured contaminant concentrations and associated contour maps; the interpreted extent of contamination; and appropriate groundwater modeling results used to confirm compliance, including a detailed description and explanation of improvements made to the computer model of groundwater flow and contaminant migration in the preceding year and the resulting calibration; summaries of relevant operating and field data, including mass removal; any preliminary calculations and supporting data used to evaluate compliance; descriptions of the nature of,

285

duration of, and response to any noncompliance; and any other requirements outlined in the General Monitoring Plan and the Compliance Monitoring Plan.

Initially, at a minimum, individual contaminant contour maps shall be prepared indicating the extent of PCE, TCE (shallow and deep zones), perchlorate, 1,4-dioxane, NDMA, and hexavalent chromium (shallow zone) contamination. Additional contour maps shall be prepared if requested by EPA to indicate the extent of contamination in additional depth intervals, or for additional contaminants. Assumptions made in excluding, truncating, averaging, or otherwise selecting or manipulating the data to be used in preparing the contour maps should be clearly stated. Performance Evaluation Reports shall be provided as described in Section V of this SOW.

K. Progress Reports

West Side Performing Settling Defendants shall submit reports on progress of work required under the Consent Decree and this SOW. These progress reports shall provide information as required by Section X of the Consent Decree, except where such information is presented in other reports submitted regularly as required under this SOW, and will be due monthly, as described in Section V of this SOW. The frequency of progress reports may be decreased in the future if the progress of work support such a decrease, and West Side Performing Settling Defendants obtain EPA approval. Standard format reporting can be used, with the ultimate goal of making the Progress Reports standardized, and adopting a compliance management by exception style.

L. Compliance Monitoring Reports

The Compliance Monitoring Reports shall include: measured contaminant concentrations at compliance wells; charts showing contaminant concentrations versus time at compliance wells; assessments and statements regarding whether Performance Criteria have been exceeded at compliance wells; predictions, if appropriate, of possible future occurrences of noncompliance; any relevant preliminary calculations and supporting data used to evaluate compliance; and any other relevant requirements outlined in the Compliance Monitoring Plan. Compliance Monitoring Reports will be due every three months, as described in Section V of this SOW. The frequency of compliance monitoring reports may be decreased in the future if the monitoring data support such a decrease, and West Side Performing Settling Defendants obtain EPA approval. The reports may be presented in a graphical format.

M. Supporting Plans

1. Sampling and Analysis Plan and Health and Safety Plan

Sampling and Analysis Plan. In accordance with Section VIII of the Consent Decree, West Side Performing Settling Defendants shall prepare a Sampling and Analysis Plan (SAP), or update an existing Plan to perform compliance and general monitoring and carry out any other field investigations needed to complete the remedial design, and construct and operate the remedial action. The Plan shall discuss the timing of data collection activities, including data collection activities needed to establish baseline conditions before startup of the remedial action.

The SAP shall include a Field Sampling and Analysis Plan (FSAP), a Quality Assurance Project Plan (QAPP), and a schedule for implementation of all field activities including but not limited to well installation, sampling, analysis, and reporting activities. The FSAP and QAPP may be submitted as one document or separately, and may reference an existing FSAP or QAPP. Upon EPA approval, West Side Performing Settling Defendants shall proceed to implement the sampling activities described in the SAP.

- a. The FSAP shall describe sampling objectives, analytical parameters, sample locations and frequencies, sampling equipment and procedures, sample handling and analysis, management of investigation-derived wastes, and planned uses of the data. The FSAP shall be consistent with "Preparation of a U.S. EPA Region 9 Field Sampling Plan for Private and State-Lead Superfund Projects" (Document Control No. 9QA-06-89, April 1990), and other applicable guidance. It shall be written so that a field sampling team unfamiliar with the project would be able to gather the samples and field information required. The FSAP shall include a description of the arrangements for disposal of investigation-derived waste.
- b. The QAPP shall describe project objectives, organizational and functional activities, data quality objectives (DQOs), and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The QAPP shall be consistent with "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations" (EPA QA/R-5, November 1999), and "Guidance for the Data Quality Objectives Process" (EPA QA/G-4, September 1994) and other applicable guidance (see list of references). The DQOs shall, at a minimum, reflect use of

analytical methods for obtaining data of sufficient quality to meet National Contingency Plan requirements as identified at 40 CFR 300.435 (b). In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, document control procedures, preservation of records (see Sections VIII, XXIV, and XXV of the Consent Decree), data reduction, data validation, data management, procedures that will be used to enter, store, correct, manipulate, and analyze data; protocols for transferring data to EPA in electronic format; and document management.

West Side Performing Settling Defendants shall demonstrate in advance and to EPA's satisfaction that each laboratory they may use is qualified to conduct the proposed work and meets the requirements specified in Section VIII of the Consent Decree. EPA may require that West Side Performing Settling Defendants submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment and material specification, and laboratory analyses of performance samples (blank and/or spike samples). In addition, EPA may require submittal of data packages equivalent to those generated by the EPA contract laboratory program (CLP).

Health and Safety Plan. To ensure protection of on-site personnel and area residents from hazards posed by sampling activities, West Side Performing Settling Defendants shall also develop a Health and Safety Plan (or update an existing Plan). The Plan shall be in conformance with U.S. Occupational, Safety, and Health Administration (OSHA) requirements as outlined in 29 CFR §§1910 and 1926, and any other applicable requirements. The Health and Safety Plan shall describe health and safety risks, employee training, monitoring and personal protective equipment, medical monitoring, levels of protection, safe work practices and safeguards, contingency and emergency planning, and provisions for site control. EPA will review but will neither approve nor disapprove West Side Performing Settling Defendants' Health and Safety Plan.

2. Construction Quality Assurance Plan

West Side Performing Settling Defendants shall develop and implement a Construction Quality Assurance Plan to ensure, with a reasonable degree of certainty, that the completed Remedial Action meets or exceeds all design criteria, plans and specifications, and Performance Standards. The

Construction Quality Assurance Plan shall include the following elements:

- a. Responsibilities and authorities of all organizations and key personnel involved in the design and construction of the Remedial Action;
- b. A description of the quality control organization, including a chart showing lines of authority, members of the Quality Assurance team, their responsibilities and qualifications, and acknowledgment that the Quality Assurance team will implement the quality control system for all aspects of the work specified and shall report to the West Side Performing Settling Defendants' Project Coordinator and EPA. Members of the Quality Assurance team shall have a good professional and ethical reputation, previous experience in the type of QA/QC activities to be implemented, and demonstrated capability to perform the required activities. They shall also be independent of the construction contractor;
- c. Description of the observations, inspections, and control testing that will be used to assure quality workmanship, verify compliance with the plans and specifications, or meet other QC objectives during implementation of the Remedial Action. This includes identification of sample size, sample locations, and sample collection or testing frequency; and acceptance and rejection criteria. The Plan shall specify laboratories to be used, and include information which certifies that personnel and laboratories performing the tests are qualified and the equipment and procedures to be used comply with applicable standards;
- d. Reporting procedures, frequency, and format for QA/QC activities. This shall include such items as daily summary reports, inspection data sheets, problem identification and corrective measures reports, design acceptance reports, and final documentation. Provisions for the final storage of all records shall be presented in the Construction Quality Assurance Plan. The QA official shall report simultaneously to the West Side Performing Settling Defendants' representative and to EPA; and
- e. A list of definable features of the work to be performed. A definable feature of work is a task which is separate and distinct from other tasks and has separate quality control requirements.

3. Construction Health and Safety Plan

West Side Performing Settling Defendants shall prepare a Construction Health and Safety Plan in compliance with OSHA regulations and protocols and other applicable requirements. The Construction Health and Safety Plan shall describe health and safety risks, employee training, monitoring and personal protective equipment, medical monitoring, individuals responsible in an emergency, and provisions for site control for workers and for visitors to the job site. EPA will review but neither approve nor disapprove West Side Performing Settling Defendants' Construction Health and Safety Plan.

N. Work Complete Report

As specified in the approved schedule included in Section V of this SOW, after all phases of the Work (including O&M) under the Consent Decree have been performed, West Side Performing Settling Defendants shall submit a Work Complete Report. In the report, a registered Professional Engineer and West Side Performing Settling Defendants' Project Coordinator shall state that the Work has been completed in full satisfaction of the requirements of the Consent Decree. The written report shall provide a synopsis of the work defined in this SOW, describe deviations from the RD/RA Work Plan, provide actual costs of the Remedial Action (and O&M), and provide a summary of the results of operational and performance monitoring completed. The report shall contain the following statement, signed by a responsible corporate official of the West Side Performing Settling Defendants or the West Side Performing Settling Defendants' Project Coordinator:

"To the best of our knowledge, after thorough investigation, we certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

V. Schedule for Major Deliverables and Other Tasks [Note: schedule to be revised as necessary to account for work completed prior to Consent Decree]

This schedule assumes a Design-Build approach will be utilized.

ACTIVITY	DATE
Lodging Date of Consent Decree	
Notification of Project Coordinator (as required by Section XII of the Consent Decree)	Twenty (20) days after the lodging date of the consent Decree
PLANNING DOCUMENTS	
Compliance and Sentinel Well Network Plan	<p>Thirty (30) days after the lodging date of the Consent Decree (EPA review time of 14 days) ¹</p> <p>If necessary, revised Plan due 14 days after receipt of EPA comments</p>
Initiate Compliance and Sentinel Well Installation	Forty-five (45) days after EPA approval of Compliance and Sentinel Well Network Plan
Compliance and Sentinel Well Installation Report	<p>Forty five (45) days after completion of compliance and sentinel installation activities (EPA review time of 14 days) ¹</p> <p>If necessary, revised Report due 21 days after receipt of EPA comments</p>
Compliance and Sentinel Well Network Monitoring Plan	<p>Thirty (30) days after EPA approval of Compliance and Sentinel Well Installation Report (EPA review time of 21 days) ¹</p> <p>If necessary, revised Plan due 21 days after receipt of EPA comments</p>

ACTIVITY	EXPIRATION DATE
RD/RA Work Plan	Forty five (45) days after EPA approval of the Compliance and Sentinel Well Installation Report (EPA review time of 21 days) ¹ If necessary, revised plan due 21 days after receipt of EPA comments
General Monitoring Plan	Sixty (60) days after EPA approval of Conceptual and Preliminary Design Submittal (EPA review time of 30 days) ¹ If necessary, revised plan due 21 days after receipt of EPA comments
REMEDIAL DESIGN	
Notification of Supervising Contractor (as required by Section VI of the Consent Decree)	Ninety (90) days after the lodging date of the Consent Decree (EPA review time of 14 days) ¹ If necessary, revised contractor list due 30 days after receipt of EPA comments
RD/RA Work Plan	Update, as necessary
Conceptual and Preliminary Remedial Design Submittal	Ninety (90) days after approval of RD/RA Work Plan (EPA review time of 28 days) ¹ If necessary, revised design due 28 days after receipt of EPA comments
Intermediate Remedial Design Submittal	Not required
Construction Bid Packages	Forty five (45) days after EPA approval of Conceptual and Preliminary Design Submittal (EPA review time of 28 days) ¹
As-Built Construction Drawings	Concurrent with Remedial Action Construction Report

292

SCHEDULE	
SCHEDULE	
Selection of Construction Sub Contractors	Sixty days (60) days after issuance of bid packages
Notification of Selected Construction Sub Contractors	Within 5 days of selection
Pre-Construction Meeting	Twenty one (21) days after selection of construction sub contractors
Initiate Construction	Fourteen (14) days after Pre-Construction Meeting
Complete Construction	Per milestone schedule in EPA approved Conceptual and Preliminary Design Submittal
Pre-Final Construction Inspection	Fourteen (14) days after West Side Performing Settling Defendant determines that the remedial action is operating as designed
Pre-Final Construction Inspection Report	Fourteen (14) days after Pre-Final Construction Inspection
Final Construction Inspection (if needed)	To be defined in the Pre-Final Construction Inspection Report
Final Construction Inspection Report (if needed)	Fourteen (14) days after Final Construction Inspection
Remedial Action Construction Report	Draft due sixty (60) days after EPA approval of Pre-Final/Final Construction Inspection Report (EPA review time of 28 days) ¹ If needed, revised Report due 28 days after receipt of EPA comments

ACTIVITIES	
Interim Remedial Action Report	<p>Draft due two hundred and seventy (270) days after EPA approval of the Remedial Action Construction Report or fourteen (14) days after West Side Performing Settling Defendant determines that performance criteria for the remedial action are being met, whichever is earlier</p> <p>(EPA review time of 28 days)¹</p> <p>If needed, revised Report due 28 days after receipt of EPA comments</p>
OPERATION AND MAINTENANCE	
Operation and Maintenance Manual	<p>Draft Manual due 14 days after pre-Final/Final Construction Inspection</p> <p>If requested by EPA, revised Manual due 21 days after receipt of EPA comments</p>
PERFORMANCE EVALUATION	
Performance Evaluation Reports	Due every 6 months for first three years, and annually thereafter following EPA approval of Remedial Action Construction Report
Progress Reports	Due monthly, beginning thirty (30) days after the lodging date of the Consent Decree
Quarterly Compliance and Sentinel Well Network Monitoring Reports	Per schedule in the EPA approved Compliance and Sentinel Well Network Monitoring Plan
Non-compliance Notification	Due seven (7) days after receipt of information indicating non-compliance
Compliance Action Plan	Draft due fourteen (14) days after receipt of information indicating non-compliance
Compliance Correction Report	As established in an EPA approved Compliance Action Plan

ACTIVITY	
SUPPORTING PLANS	
Sampling and Analysis Plan	No later than the date of the Conceptual and Preliminary Remedial Design submittal
Site Health and Safety Plan	No later than the date of the Conceptual and Preliminary Remedial Design submittal
Construction Quality Assurance Plan, Construction Health and Safety Plan	Concurrent with Conceptual and Preliminary Design Submittal
CERTIFICATIONS REQUIRED TO Satisfy SECTION 10 OF CONSENT DECREE	
Pre-Certification Inspection for Completion of the Work	Forty-five (45) days after West Side Performing Settling Defendant concludes that all Work has been performed, including completion of all Operation and Maintenance activities
Certification that all Work has been Completed	Thirty (30) days after the pre-certification inspection

1. Estimated time, in calendar days. Failure to review a deliverable within the estimated time shall not constitute a violation of the Consent Decree by the United States.

This schedule assumes a Design-Bid-Build approach will be utilized.

ACTIVITY	DUE DATE
Lodging Date of Consent Decree	
Notification of Project Coordinator (as required by Section XII of the Consent Decree)	Twenty (20) days after the lodging date of the Consent Decree
PLANNING DOCUMENTS	
Compliance and Sentinel Well Network Plan	Thirty (30) days after the lodging date of the Consent Decree (EPA review time of 14 days) ¹ If necessary, revised Plan due 14 days after receipt of EPA comments
Initiate Compliance and Sentinel Well Installation	Forty-five (45) days after EPA approval of Compliance and Sentinel Well Network Plan
Compliance and Sentinel Well Installation Report	Forty five (45) days after completion of compliance and sentinel installation activities (EPA review time of 14 days) ¹ If necessary, revised Report due 21 days after receipt of EPA comments
Compliance and Sentinel Well Network Monitoring Plan	Thirty (30) days after EPA approval of Compliance and Sentinel Well Installation Report (EPA review time of 21 days) ¹ If necessary, revised Plan due 21 days after receipt of EPA comments

ACTIVITY	DUE DATE
RD/RA Work Plan	<p>Forty five (45) days after EPA approval of the Compliance and Sentinel Well Installation Report</p> <p>(EPA review time of 21 days)¹</p> <p>If necessary, revised plan due 21 days after receipt of EPA comments</p>
General Monitoring Plan	<p>Sixty (60) days after EPA approval of Conceptual and Preliminary Design Submittal</p> <p>(EPA review time of 30 days)¹</p> <p>If necessary, revised plan due 21 days after receipt of EPA comments</p>
REMEDIAL DESIGN	
Notification of Supervising Contractor (as required by Section VI of the Consent Decree)	<p>Ninety (90) days after the lodging date of the Consent Decree</p> <p>(EPA review time of 14 days)¹</p> <p>If necessary, revised contractor list due 30 days after receipt of EPA comments</p>
RD/RA Work Plan	Update, as necessary
Conceptual and Preliminary Remedial Design Submittal	<p>Ninety (90) days after approval of RD/RA Work Plan</p> <p>(EPA review time of 28 days)¹</p> <p>If necessary, revised design due 28 days after receipt of EPA comments</p>
Intermediate Remedial Design Submittal	Not required
Pre-Final Remedial Design Submittal	<p>Ninety (90) days after EPA approval of Conceptual and Preliminary Design Submittal</p> <p>(EPA review time of 28 days)¹</p>

ACTIVITY	DUE DATE
Final Remedial Design Submittal (if needed)	Twenty one (21) days after EPA approval of Pre-Final Remedial Design Submittal (EPA review time of 14 days) ¹
REMEDIAL ACTION	
Selection of Construction Contractor	Sixty days (60) days after EPA approval of Pre-Final/Final Remedial Design Submittal
Notification of Selected Construction Contractor	Within 5 days of selection
Pre-Construction Meeting	Fourteen (14) days after EPA approval of selected construction contractor
Initiate Construction	Fourteen (14) days after Pre-Construction Meeting
Complete Construction	Per milestone schedule in EPA approved Pre-Final/Final Design Submittal
Pre-Final Construction Inspection	Fourteen (14) days after West Side Performing Settling Defendant determines that the remedial action is operating as designed
Pre-Final Construction Inspection Report	Fourteen (14) days after Pre-Final Construction Inspection
Final Construction Inspection (if needed)	To be defined in the Pre-Final Construction Inspection Report
Final Construction Inspection Report (if needed)	Fourteen (14) days after Final Construction Inspection

ACTIVITY	DUE DATE
Remedial Action Construction Report	<p>Draft due sixty (60) days after EPA approval of Pre-Final/Final Construction Inspection Report</p> <p>(EPA review time of 28 days)¹</p> <p>If needed, revised Report due 28 days after receipt of EPA comments</p>
Interim Remedial Action Report	<p>Draft due two hundred and seventy (270) days after EPA approval of the Remedial Action Construction Report or fourteen (14) days after West Side Performing Settling Defendant determines that performance criteria for the remedial action are being met, whichever is earlier</p> <p>(EPA review time of 28 days)¹</p> <p>If needed, revised Report due 28 days after receipt of EPA comments</p>
OPERATION AND MAINTENANCE	
Operation and Maintenance Manual	<p>Draft Manual due 14 days after pre-Final/Final Construction Inspection</p> <p>If requested by EPA, revised Manual due 21 days after receipt of EPA comments</p>
PERFORMANCE EVALUATION	
Performance Evaluation Reports	Due every 6 months for first three years, and annually thereafter following EPA approval of Remedial Action Construction Report
Progress Reports	Due monthly, beginning thirty (30) days after the lodging date of the Consent Decree
Quarterly Compliance and Sentinel Well Network Monitoring Reports	Per schedule in the EPA approved Compliance and Sentinel Well Network Monitoring Plan
Non-compliance Notification	Due seven (7) days after receipt of information indicating non-compliance

ACTIVITY		DEADLINE	
Compliance Action Plan		Draft due fourteen (14) days after receipt of information indicating non-compliance	
Compliance Correction Report		As established in an EPA approved Compliance Action Plan	
SUPPORTING FILES			
Sampling and Analysis Plan		No later than the date of the Conceptual and Preliminary Remedial Design submittal	
Site Health and Safety Plan		No later than the date of the Conceptual and Preliminary Remedial Design submittal	
Construction Quality Assurance Plan, Construction Health and Safety Plan		No later than the date of the Pre-final/Final Remedial Design Submittal	
CERTIFICATIONS REQUIRED BY SECTION 2.0 OF CONSENT DECREE			
Pre-Certification Inspection for Completion of the Work		Forty-five (45) days after West Side Performing Settling Defendant concludes that all Work has been performed, including completion of all Operation and Maintenance activities	
Certification that all Work has been Completed		Thirty (30) days after the pre-certification inspection	

1. Estimated time, in calendar days. Failure to review a deliverable within the estimated time shall not constitute a violation of the Consent Decree by the United States.

VI. References

The following list, although not comprehensive, provides citations for many of the regulations and guidance documents that apply to the RD/RA process. West Side Performing Settling Defendants shall review these guidance documents and shall use the information provided therein in performing the RD/RA and preparing all deliverables under this SOW.

"National Oil and Hazardous Substances Pollution Contingency Plan, Final Rule," 40 CFR, Part 300.

"Superfund Remedial Design/ Remedial Action Handbook," U.S. EPA, Office of Emergency and Remedial Response, June 1995 (EPA 540/R-95/059).

"Interim Final Guidance on Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties," U.S. EPA, Office of Emergency and Remedial Response, February 14, 1990, OSWER Directive No. 9355.5-01.

"EPA NEIC Policies and Procedures Manual," U.S. EPA, May 1978, revised May 1986.

"Guidance for the Data Quality Objectives Process" U.S. EPA, (EPA QA/G-4).

"EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations," May 1994, U.S. EPA, (EPA QA/R-5).

"Guidance for Quality Assurance Project Plans," February 1998, U.S. EPA, (EPA QA/G-5).

"Preparation of a U.S. EPA Region 9 Field Sampling Plan for Private and State-Lead Superfund Projects," April 1990, U.S. EPA, (No. 9QA-06-89).

"Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites," U.S. EPA, Office of Emergency and Remedial Response, (Draft), OSWER Directive No. 9283.1-2.

"Methods for Monitoring Pump-and-Treat Performance," U.S. EPA, Office of Research and Development, June 1994 (EPA 600/R-94/123).

Figure 1

(pdf file)

El Monte OU

Approximate Post-RI/FS

Well Locations



700 0 700 1400 Feet



LEGEND

2002 SHALLOW VOC CONTAMINATION



VOC CONTAMINATION POTENTIALLY
RANGING FROM LABORATORY
DETECTION LIMITS TO < MCLS



VOC CONTAMINATION POTENTIALLY
RANGING FROM MCLS TO < 10 X MCLS



VOC CONTAMINATION POTENTIALLY
RANGING FROM 10 X TO < 100 X MCLS



VOC CONTAMINATION POTENTIALLY
RANGING FROM 100 X TO < 1000 X MCLS

MAJOR TRANSPORTATION

STREAMS



RI MONITORING WELL



ERAP MONITORING WELL



ERAP COMPLIANCE WELL



SHALLOW EXTRACTION WELL

Figure 1
ERAP Well Locations

El Monte OU RD/RA SOW



303

Table 1
(pdf file)

El Monte OU

Water Quality Data

Early Response Action Program Monitoring

Table 1

EI Monte OU

Water Quality Data
RI Monitoring, Early Response Action Program Monitoring (ERAP), and ERAP Extraction Wells

Well	Screened Interval (feet bgs)	Sample Date (mo/year)	PCE	TCE	1,2-DCA	1,1-DCE	c-1,2-DCE	1,1-DCA	1,1,1-TCA	CFM	MC	CCl ₄	PER	NDMA	14A	Cr ⁶⁺	NO ₃ (mg/L)	TDS (mg/L)
ERP-1	97-117	Jan-99	0.89	3.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	-	-	-	-	68	-
		Sep-98	<0.5/<0.5	3.5/3.2	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<10/<10	<0.5/<0.5	-	-	-	-	75/76	-
		Jun-00	<0.5	2.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	110	540
		Nov-01	<0.5	4.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	100	-
		Dec-98	<0.5	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	-	-	-	-	120	-
ERP-2	82-102	Sep-99	0.72	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	-	-	-	-	-	-
		Jun-00	3	31	<1	<1	<1	<1	<1	<1	<1	<10	<1	9.6	0.0024	0.23	-	-
ERP-3	85-105	Jan-99	0.7	0.69	<0.5	<0.5	<0.5	<0.5	<0.5	22	<10	<0.5	-	-	-	-	19	-
		Sep-99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	19	<10	<0.5	-	-	-	-	28	-
		Jun-00	<1	<1	<1	<1	<1	<1	<1	34	<10	<1	-	-	-	-	-	-
		Nov-01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	39	<5	<0.5	-	-	-	-	29	680
		Jan-99	2.9	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	-	-	-	-	54
ERP-4	70-90	Sep-99	2.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	-	-	-	-	47	-
		Jun-00	4.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	-	-
		Nov-01	6.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<5	<0.5	-	-	-	57	510
		Jan-99	150	610	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<50	<20	-	-	-	-	79	-
		Sep-99	230	920	<5	<5	<5	<5	<5	<5	<100	27	-	-	-	-	73	-
ERP-5	69-89	Jun-00	180	760	<25	<25	<25	<25	<25	<25	<250	<25	<4	0.0041	0.0351	-	-	-
		Aug-01	120	460	<0.5	<0.5	2.2	0.53	<0.5	<0.5	0.89	<5	15	<4	<0.5	4.5	110	620
		Jan-99	14/12	18/16	<0.5/<0.5	0.51/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<10/<10	<0.5/<0.5	-	-	-	-	180/180	-
		Sep-99	29	42	<1	1.9	<1	<1	<1	<1	<20	<1	-	-	-	-	180	-
		Jun-00	22/24	18/19	<0.5/<0.5	1.1/1.1	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<5/<5	<0.5/<0.5	4.3/3.3J	0.0016J/0.0024	0.23/0.18	-	-	-
ERP-7	42-62	Dec-98	84	180	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<50	<5	-	-	-	-	90	-
		Sep-99	14	25	<0.5	0.55	<0.5	<0.5	<0.5	<0.5	<10	<0.5	-	-	-	-	81	-
		Aug-01	3.9	7.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<4	-	-	19	150	
		Nov-01	4.5	8.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<4	-	-	18	140	
		Apr-99	0.56	4.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	-	-	-	39	-	
ERP-8 (zone 3)	155-165	Sep-99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.12	<0.13	<0.14	-	<0.5	-
		Nov-00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	-	-
		Apr-99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	-	-	-	-	14	-
		Sep-99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	-	-	-	-	14	-
		Nov-00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	-	-
ERP-8 (zone 1)	360-370	Jun-03	<1	<1	<1	<2	<1	<1	<1	<1	<10	<2	-	-	-	-	-	-
		Apr-99	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<10/<10	<0.5/<0.5	-	-	-	-	21/1.9	-
		Sep-99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	-	-	-	-	0.79	-
		Nov-00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	-	-
		Jun-03	2.1	9	<1	<2	<1	<1	<1	<1	<10	<2	-	-	-	-	-	-
ERP-9	96-116	Aug-01	1.8	3.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	18	490
		Aug-01	1.9	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	33	<5	<0.5	-	-	-	21	550
		May-02	<0.5	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	42	320
		Jun-00	<0.5	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	95	560
		Aug-00	<0.5	7.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<4	<0.002	0.12	<0.5	8.3	-
EW-18*	80-110	Aug-01	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	5.8	-	<0.5	-	-	560
		Jun-00	3	36	<1	<1	<1	<1	<1	<1	<10	<1	-	-	-	-	-	-
		Jul-00	4.1	41	<1	<1	<1	<1	<1	<1	<10	<1	4.7	<0.002	0.37	-	93	540
		Aug-01	<0.5/<0.5	4.3/4.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<5/<5	<0.5/<0.5	6.3/7.2	-	<0.5/<0.5	10/10	-	670
		Jun-00	1.5	42	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<13	<13	-	-	-	-	-	-
EW-20*	80-110	Aug-00	1.6	40	<1	<1	<1	<1	<1	<1	<10	<1	<4	<0.002	0.51	-	73	570
		Aug-01	1.5	40	0.62	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	5	-	<0.5	12	-	610
		Sep-98	1.4	2.7	<0.5	<0.5	<0.5	<0.5	<0.5	0.51	<10	<0.5	-	-	-	-	69	-
		Jun-00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	-	-
		Nov-01	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<5/<5	<0.5/<0.5	-	-	-	-	92/88	560/610
MW2-02	60-80	Sep-99	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<10/<10	<0.5/<0.5	-	-	-	-	69/70	-
		Nov-01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	96	660
		Nov-01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	-	-
		Nov-01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	-	-
		Nov-01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	-	-	-	-	-	-

Attachment 1

June 1999 Interim Record of Decision

(See Appendix A to the Consent Decree)

Attachment 2

Explanation of Significant Differences (ESD)

(See Appendix B to the Consent Decree)

Attachment 3

Summary of Pre-Remedial Design Work

El Monte Operable Unit

Following completion of the RI/FS, the Northwest El Monte Community Task Force (NEMCTF) performed preliminary remedial design (pre-RD) work at the Site. This work, associated with the NEMCTF's Early Response Action Program (ERAP), included the following: (1) installation and sampling of eight monitoring wells in late 1998/early 1999 and preparation of an ERAP monitoring well completion report, (2) five rounds of groundwater sampling, one in December 1998/January 1999, one in September 1999, one in June 2000, one in November 2000, and one in August 2001 at selected RI, ERAP, and facility monitoring wells, including analysis for perchlorate, 1,4-dioxane, and NDMA, (3) preparation of a report evaluating discharge options for water produced from extraction wells completed in the shallow zone, (4) groundwater modeling to assist in locating shallow zone extraction wells, (5) installation, aquifer testing, and sampling of three shallow extraction wells in the western EMOU in the summer of 2000, (6) installation and sampling of two shallow zone compliance wells in the western EMOU in the Spring of 2001, and (7) installation of a third shallow zone compliance well in the western EMOU in the Spring of 2002. The following, associated, documents were prepared by Camp Dresser and McKee (CDM) on behalf of the NEMCTF:

"Sampling and Analysis Plan, Phase 1 Early Response Action Program, El Monte Operable Unit, San Gabriel Valley, Los Angeles County, California," August 31, 1998.

"EMOU Early Response Action Program, Contaminant Transport Modeling, Proposed Western Shallow Zone Extraction Well Locations," December 10, 1999.

"Phase 1A Early Response Action Program Report of Well Installations and Round 5 Groundwater Monitoring, El Monte Operable Unit, San Gabriel Valley, Los Angeles County, California," February 15, 2000.

"Discharge Options Study Report, El Monte Operable Unit, San Gabriel Valley, Los Angeles County, California," May 8, 2000.

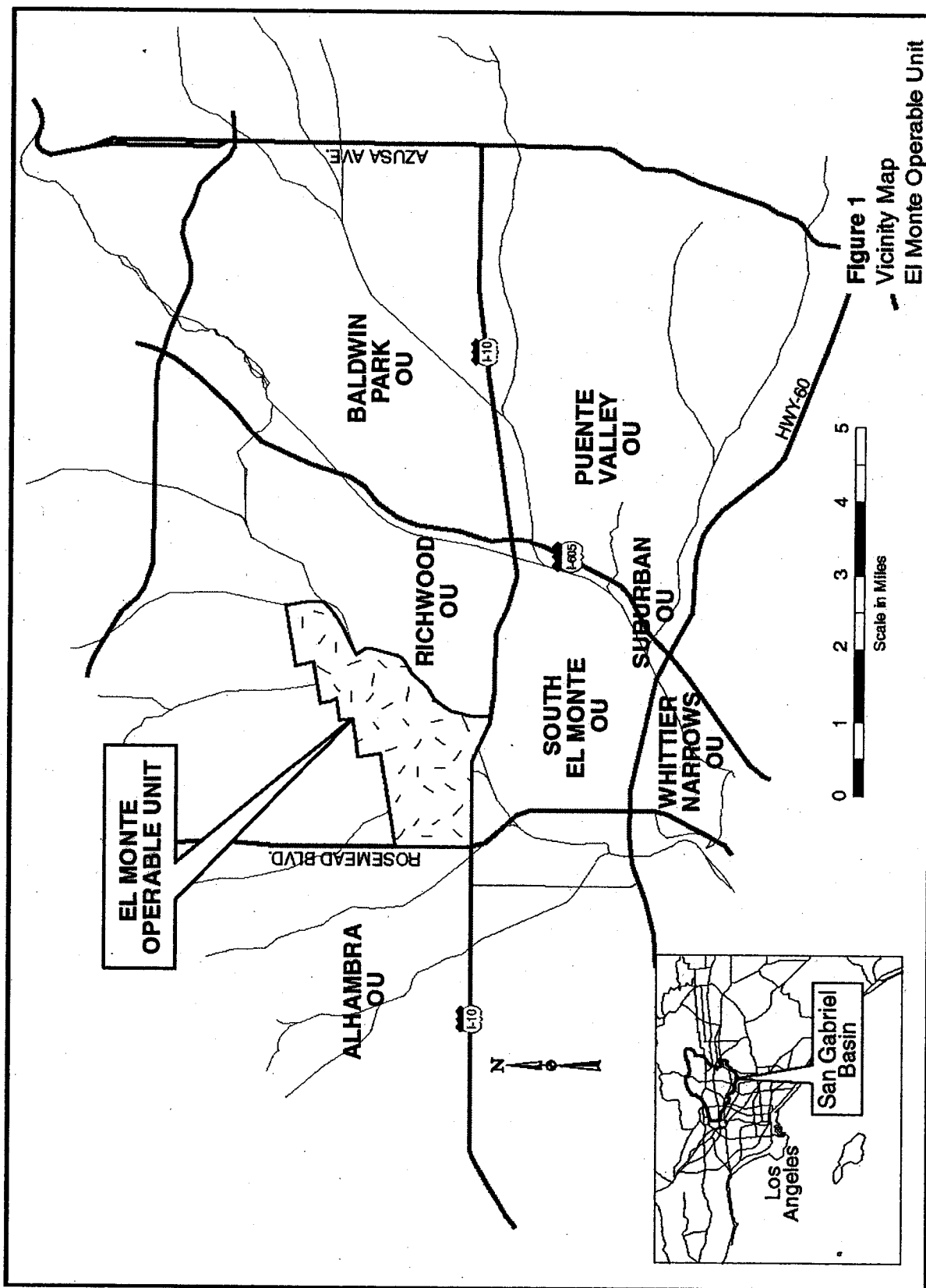
Figure 1 of the SOW depicts the approximate locations of the fourteen ERAP (pre-RD, post-RI/FS) wells: eight monitoring wells (ERP-1 to ERP-8), three shallow zone extraction wells (EW-18, EW-19, and EW-20), and three shallow zone compliance wells (ERP-9, ERP-10, and ERP-11). Extraction wells EW-18, EW-19, and EW-20 were installed near the current western extent of >MCL VOC contamination in the shallow zone, with the intention of containing VOCs above 10 times MCLs. Compliance wells ERP-9, ERP-10, and ERP-11 were installed downgradient of the extraction wells to assess compliance with the performance criteria for the western shallow zone. The location of the extraction wells and the compliance wells is subject to EPA's approval. Table 1 summarizes the sampling results from the ERAP monitoring, extraction, and compliance wells.

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Appendix E
General Site Map

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Appendix E
General Site Map



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Appendix F

List of Settling Defendants

1. "Settling Defendants" include all of the following:

Adams Family Trust, dated 11/14/86, a California trust
Sparling Instruments Co., Inc., a California corporation

Ball Glass Container Corporation, a Delaware corporation

Beagle Manufacturing Company, Inc., a California corporation
Beagle Properties, Inc., a California corporation

Brown Jordan Company, a Delaware corporation

Chadbury Company, Inc., a California corporation, f/k/a Chadwick-Helmuth
Company, Inc.
Chadwick Associates, a California partnership

Clayton Industries, a California corporation
Clayton Land Holding Company, Inc., a California nonprofit corporation

Fairchild Holding Corp., a Delaware corporation

Nikko Materials USA, Inc. dba Gould Electronics, an Arizona corporation

"Grand Avenue Industrial Park Group" members:

Lyle A. Schmidt, an individual
Karen L. Schmidt, an individual
Glen E. Powell, an individual
The estate of Thalia Powell
Harbert Grand Investment Company, LLC,
a California limited liability company
Larry G. Lindquist, an individual
Charleen S. Lindquist, an individual
David Rodriguez, Jr., an individual
Dolores Rodriguez, an individual

Hermetic Seal Corporation, a Delaware corporation

Johnson Controls, Inc., a Wisconsin corporation

M.C. Gill Corporation, a California corporation

- 1 Miller Dial Corp., a California corporation
2 Parks Properties, Inc., a California corporation
- 3 Paul Lee, an individual
- 4 PerkinElmer, Inc., a Massachusetts corporation, f/k/a EG&G Birtcher, Inc.
5 Birtcher Medical Systems, Inc., a California corporation,
6 f/k/a The Birtcher Corporation
- 7 Plato Products, Inc., a California corporation
8 Kenel, Inc., a California corporation
9 Eldred and Kent, a California general partnership
- 10 Precision Coil Spring Company, a California corporation
- 11 B. J. Sabin, an individual
12 Sabin Construction, Inc., a California corporation
- 13 Safety-Kleen Systems, Inc., a Wisconsin corporation
- 14 Trail Chemical Corporation, a California corporation
- 15
- 16 Union Pacific Railroad Company, a Delaware corporation
- 17 2. "East Side Performing Settling Defendants" include all of the following:
18 Nikko Materials USA, Inc. dba Gould Electronics
19 Johnson Controls, Inc.
20
- 21 3. "West Side Performing Settling Defendant" includes all of the following:
22 Hermetic Seal Corporation
- 23 4. "Contributing Settling Defendants" include all of the following:
24 Adams Family Trust
25 Sparling Instruments Co., Inc.
26 Ball Glass Container Corporation
27 Beagle Manufacturing Company, Inc.
28 Beagle Properties, Inc.

1 Brown Jordan Company
2
3 Chadbury Company, Inc., f/k/a Chadwick-Helmuth Company, Inc.
4 Chadwick Associates
5
6 Clayton Industries
7 Clayton Land Holding Company, Inc.
8
9 Fairchild Holding Corp.
10
11 "Grand Avenue Industrial Park Group" members
12 Lyle A. Schmidt
13 Karen L. Schmidt
14 Glen E. Powell
15 The estate of Thalia Powell
16 Harbert Grand Investment Company, LLC
17 Larry G. Lindquist
18 Charleen S. Lindquist
19 David Rodriguez, Jr.
20 Dolores Rodriguez
21
22 M.C. Gill Corporation
23
24 Miller Dial Corp.
25 Parks Properties, Inc.
26
27 PerkinElmer, Inc., f/k/a EG&G Birtcher, Inc.
28 Birtcher Medical Systems, Inc., f/k/a The Birtcher Corporation
29
30 Plato Products, Inc.
31 Kenel, Inc.
32 Eldred and Kent
33
34 Precision Coil Spring Company
35
36 B. J. Sabin
37 Sabin Construction, Inc.
38
39 Trail Chemical Corporation
40
41 Union Pacific Railroad Company
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1 5. "Ability-to-Pay Settling Defendants" include all of the following:

2 Safety-Kleen Systems, Inc.

3 Paul Lee

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Appendix G
Addresses for Notices Pursuant to Section XXVI (Notices and Submissions)
and for Service Pursuant to Section XXXIII (Signatories/Service)

As to the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DJ # 90-11-2-354/3

Bella Dizon
Remedial Project Manager
U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street,
San Francisco, CA 94105

Keith Takata
Director, Superfund Division
United States Environmental Protection Agency
Region 9
75 Hawthorne Street,
San Francisco, CA 94105

As to State of California DTSC:

Jackie Spizman
Department of Toxic Substances Control
5796 Corporate Avenue
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Ann Rushton
Deputy Attorney General
Environment Section
Office of the Attorney General
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Phone: (213) 897-2608
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Adams Family Trust
Sparling Instruments Co., Inc.

John H. Adams, Trustee
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1 and

2 Malissa Hathaway McKeith, Esq.
3 Miguel A. Sanqui, Esq.
4 Loeb & Loeb LLP
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9 **Ball Glass Container Corporation**

10 Patrick S. Looney, Esq.
11 Ball Corporation
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13 Broomfield, CO 80021-2510
14 Fax: (303) 460-2691

15 and

16 Patricia L. Shanks, Esq.
17 Bingham McCutchen LLP
18 355 S. Grand Ave., Suite 4400
19 Los Angeles, CA 90071
20 Fax: (213) 680-6499

21 **Beagle Manufacturing Company, Inc.**

22 Robert S. McCracken, President
23 Beagle Manufacturing Co., Inc.
24 2136 Kings Crest Drive
25 West Covina, CA 91791
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27 **Beagle Properties, Inc.**

28 Jean L. Drabble, President
29 Beagle Properties, Inc.
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31 Pasadena, CA 91101
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33 and

34 Michael E. Mills, Esq.
35 Mills & Mills
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37 Los Angeles, CA 90025-5245

1 Fax: (310) 979-0159

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3 **Brown Jordan Company**

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5 Frank Taff, Chief Operating Officer

6

7 9860 Gidley Street

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9 El Monte, California 91731

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11 Fax: (626) 575-0126

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13 and

14

15 Matthew Shaps, Esq.

16

17 Paul Hastings Janofsky & Walker, LLP

18

19 55 Second Street, 24th Floor

20

21 San Francisco, CA 94105-3441

22

23 Fax: (415) 856-7100

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25 **Chadbury Company, Inc.**

26

27 **Chadwick Associates**

28

29 William H. Chadwick

30

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32

33 Arroyo Grande, CA 93420

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35 Fax: (626) 350- 4236

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37 and

38

39 Michael R. Leslie, Esq.

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44

45 Los Angeles CA 90017

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47 Fax: (213) 629-9022

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49

50 **Clayton Industries**

51

52

53 William Clayton Jr.

54

55 Chairman of the Board

56

57 Clayton Industries

58

59 4213 North Temple City Blvd.

60

61 El Monte California 92731-1091

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63 Fax: (626) 443-5662

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65

66 and

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68

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70

71 Hanna and Morton LLP

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74

75 Suite 1500

76

77 Los Angeles, CA 90071

1 Fax: (213) 623-3379

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3 **Clayton Land Holding Company, Inc.**

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5 Clayton Land Holding Co, Inc.
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8 Attention: Andrew MacKenzie
9 Vice President

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and

12

13 Brian Crozier, Esq.
14 Brorby, Crozier and Dobie PC
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16 Austin Texas 78701

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Fax: (512) 320-7041

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19 **Fairchild Holding Corp.**

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21 Michael Hodge, Esq.
22 Fairchild Corporation
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24 Dulles, VA 20166-7516

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Fax: (703) 478-5767

26

27 **Nikko Materials USA, Inc., dba Gould Electronics**

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29 Thomas N. Rich
30 Chief Financial Officer and Secretary
31 Nikko Materials USA, Inc.
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33 Eastlake, OH 44095

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Fax: (440) 953-5014

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and

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6 **"Grand Avenue Industrial Park Group" members**

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21 and

22 Thomas P. Schmidt, Esq.
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26 **Johnson Controls, Inc.**

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28 Dennis Reis LLC
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1 **M.C. Gill Corporation**

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12 Fax: (949) 760-5200

13 **Miller Dial Corp.**

14 Phil Rutten, President
15 Miller Dial Corp.
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25 **Parks Properties, Inc.**

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27 Parks Properties, Inc.
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33 Fax: (626) 288-8766

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3 Associate General Counsel
4 PerkinElmer, Inc.
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6 Wellesley, MA 02481
7 Fax (781) 431-4115

8 and

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13 Fax (213) 599-3450

14 **Birtcher Medical Systems, Inc.**

15 Birtcher Medical Systems, Inc.
16 c/o ConMed Corporation
17 Att.: Daniel S. Jonas, Esq.
18 525 French Road
19 Utica, New York 13502-5994
20 Fax (315) 793-8929

21 and

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25 Suite 2200
26 Los Angeles, California 90071-3132
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28 **Plato Products, Inc. and Kenel, Inc.**

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30 Plato Products, Inc.
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33 Fax: (626) 913-9270

34 and

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3 Fax: (213) 624-1376
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8 and
9

10 William D. Eldred
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12 **Precision Coil Spring Company**

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14 Bert Goering
The Precision Coil Spring Company
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18 and

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24 **B. J. Sabin**

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and

1 Patricia L. Walker, Esq.
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5 **Safety-Kleen Systems, Inc.**

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10

and

11 Kirk Wilkinson, Esq.
12 Latham & Watkins
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16 **Trail Chemical Corporation**

17 William J. Peters
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and

21 Stephen L. Marsh, Esq.
22 Luce Forward Hamilton & Scripps
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23 San Diego, CA 92101-3391

24 Fax: (619) 645-5363
25

26 **Union Pacific Railroad Company**

27 David P. Young, Esq.
Union Pacific Railroad
28 1416 Dodge Street, Rm. 830
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and

James A. Levy
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Fax: (916) 789-5562

and

Patricia M. O'Toole, Esq.
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333 South Grand Avenue, 42nd Floor
Los Angeles, CA 90071

Fax: (213) 683-1148

Appendix H

Payment Obligations of Contributing Settling Defendants

1. "De Minimis Group": The following Contributing Settling Defendants will pay, collectively, into a qualified settlement fund, established pursuant to IRC § 468B(g) by Performing Settling Defendant, Nikko Materials USA, Inc. (dba Gould Electronics), the sum of Three Million Seven Hundred Fifty Thousand Dollars (\$3,750,000.00) within 70 days of the Effective Date (unless an appeal of the entry of the Consent Decree is taken, in which case the payment will not become due until 10 days after final resolution of the appeal in favor of entry): Ball Glass Container Corporation, Beagle Manufacturing Company, Inc., Beagle Properties, Inc., Brown Jordan Company, Chadbury Company, Inc. (f/k/a Chadwick-Helmuth Company, Inc.), Fairchild Holding Corp., M. C. Gill Corporation, Miller Dial Corp., Precision Coil Spring Company, B. J. Sabin, and Union Pacific Railroad Company.

2. "West Side Settlers" Group: The following Contributing Settling Defendants will pay to Performing Settling Defendant, Hermetic Seal Corporation, their respective shares of the sum of Two Million Six Hundred Fifty Thousand Dollars (\$2,650,000.00) within 30 days after execution of this Consent Decree by all Parties hereto: Adams Family Trust, Clayton Industries, and Plato Products, Inc., Kenel, Inc. and Eldred and Kent.

3. "Grand Avenue Industrial Park Group": The following Contributing Settling Defendants will pay into a qualified settlement fund, established pursuant to IRC § 468B(g) by Performing Settling Defendant, Nikko Materials USA, Inc. (dba Gould Electronics), their respective shares of the sum of Three Hundred Thousand Dollars (\$300,000.00) within 70 days of the Effective Date (unless an appeal of the entry of the Consent Decree is taken, in which case the payment will not become due until 10 days after final resolution of the appeal in favor of entry): Lyle A. Schmidt, Karen L. Schmidt, Glen E. Powell, the estate of Thalia Powell, Harbert Grand Investment Company, LLC, Larry G. Lindquist, Charleen S. Lindquist, David Rodriguez, Jr., and Dolores Rodriguez.

4. Trail Chemical Corporation: Contributing Settling Defendant, Trail Chemical Corporation, will pay into a qualified settlement fund, established pursuant to IRC § 468B(g) by Performing Settling Defendant, Nikko Materials USA, Inc. (dba Gould Electronics), the sum of

1 One Hundred Eighty-Seven Thousand Five Hundred Dollars (\$187,500.00) within 70 days of the
2 Effective Date (unless an appeal of the entry of the Consent Decree is taken, in which case the
3 payment will not become due until 10 days after final resolution of the appeal in favor of entry).

4 5. PerkinElmer, Inc.: Contributing Settling Defendant, PerkinElmer, Inc., will pay
5 into a qualified settlement fund, established pursuant to IRC § 468B(g) by Performing Settling
6 Defendant, Nikko Materials USA, Inc. (dba Gould Electronics), the sum of Eight Hundred
7 Thousand Dollars (\$800,000.00) within 70 days of the Effective Date (unless an appeal of the
8 entry of the Consent Decree is taken, in which case the payment will not become due until 10
9 days after final resolution of the appeal in favor of entry).

10 6. Birtcher Medical Systems, Inc.: Contributing Settling Defendant, Birtcher
11 Medical Systems, Inc., will pay into a qualified settlement fund, established pursuant to IRC §
12 468B(g) by Performing Settling Defendant, Nikko Materials USA, Inc. (dba Gould Electronics),
13 the sum of One Million Twenty-Five Thousand Dollars (\$1,025,000.00) within 70 days of the
14 Effective Date (unless an appeal of the entry of the Consent Decree is taken, in which case the
15 payment will not become due until 10 days after final resolution of the appeal in favor of entry).

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Appendix I

List of Recipients of EPA Special Notice Letter Dated July 12, 2001

Remedial Design/Remedial Action

**Recipients of 7/12/01 Special Notice Letter
Remedial Design/Remedial Action
El Monte Operable Unit**

**R. David Hoover, President
Ball-Foster Glass Container Co
10 Longs Peak Drive
Broomfield, CO 80021**

For Property located at 4000 Arden Drive, El Monte, CA 91731

**Robert S. McCracken, President
Beagle Mfg. Co., Inc.
4377 Baldwin Ave.
El Monte, CA 91731**

**Bill Echols, President
Brown Jordan Co.
9860 Gidley St.
El Monte, CA 91731**

**William Chadwick, President
Chadwick-Helmuth Co., Inc.
4601 N. Arden Drive
El Monte, CA 91731**

**John Clayton, President
Clayton Manufacturing
4213 N. Temple City Blvd.
El Monte, CA 91731**

**Robert L. Coombes
Crown City Plating Co.
4350 Temple City Blvd.
El Monte, CA 91731**

**Daniel T. Heaney
EG&G, Inc.
45 William Street
Wellesley, MA 02481**

For Property located at 4505 N. Arden Drive, El Monte, CA 91731

**Eric Steiner, President, CEO, Director
Fairchild Corporation
45025 Aviation Drive, Suite 400
Dulles, VA 20166**

For Properties located at 9440 and 9620 Gidley Street, Temple City, CA 91780

**Recipients of 7/12/01 Special Notice Letter
Remedial Design/Remedial Action
El Monte Operable Unit**

C. David Ferguson, CEO
Gould Electronics, Inc.
34929 Curtis Boulevard
East Lake, OH 94095

For Properties located at 4323 Arden Drive El Monte, CA 91731, 4505 N. Arden Drive, El Monte, CA 91731, and 4601 N. Arden Drive El Monte, CA 91731

Andrew Goldfarb, President
Hermetic Seal Corp.
4232 Temple City Blvd.
Rosemead, CA 91770-1552

Merwyn C. Gill, Chief Executive Officer
M.C. Gill Corporation
4056 Easy Street
El Monte, CA 91731

Mr. Philip Rutten, President
Miller Dial Corporation
4400 N. Temple City Boulevard
El Monte, CA 91731

Clifford Christ
Navcom Defense Electronics, Inc.
4323 Arden Drive
El Monte, CA 91731

Gary Lachman, President
Plato Products, Inc.
18731 Railroad St.
Industry, CA 91748

For Property located at 4357 Rowland Ave., El Monte, CA 91731

Albert H. Goering, President
Precision Coil Spring Company of California
10107 Rose Street
El Monte, CA 91731-1801

Bill Sabin
Sabin Construction
145 Alamo Hills Court
Alamo, CA 94507

For Property located at 4327 North Temple City Blvd., Temple City, CA 91780

**Recipients of 7/12/01 Special Notice Letter
Remedial Design/Remedial Action
El Monte Operable Unit**

Charles Christianson
Sparling Instruments, Inc.
4097 Temple City Blvd.
El Monte, CA 91731

Harold Henderson, President
Trail Chemical Corporation
9904 Gidley St.
El Monte, CA 91731-1186

R.K. Davidson, President
Union Pacific Railroad Company
1416 Dodge Street, Suite 5900
Omaha, NE 68179

For Property located at 4301 Temple City Boulevard, Temple City, CA (leased
by former Glendora Cedar Products, Inc.)

Raymond E. Harbert and Mabel G. Harbert
Harbert Family Trust
11706 E. Romma Blvd., Apt. 204
El Monte, California 91732

For Property located at 10946 East Grand Avenue, Temple City, CA

Larry Lindquist
Lindquist Family Trust
627 Hampton Road
Arcadia, CA 91006

For Property located at 10946 East Grand Avenue, Temple City, CA

Lyle A. and Karen L. Schmidt
2300 South 3rd Avenue
Arcadia, California 91006

For Property located at 10946 East Grand Avenue, Temple City, CA

Glen Powell
Powell Trust
11706 Ramona Blvd.
El Monte, CA 91731

For Property located at 10946 East Grand Avenue, Temple City, CA

**Recipients of 7/12/01 Special Notice Letter
Remedial Design/Remedial Action
El Monte Operable Unit**

**Paul Lee
9416 East Valley Blvd.
Rosemead, CA 91770**

For Property located at 9406 East Valley Blvd., Rosemead, CA 91770

**Hugh Young
28198 Merced Avenue
Wasco, CA 93280**

For Property located at 9406 East Valley Blvd., Rosemead, CA 91770

**Evelyn Stewart
c/o Allison Adams
P.O. Box 265
Stanton, CA 90680**

For Property located at 3728 Rockwell Avenue, El Monte, CA 91731

**Catalina Tao
Majestic Handicrafts Company
10180 East Valley Blvd.
El Monte, CA 91731**

For Property located at 10180 East Valley Blvd., El Monte, CA 91731